

## Collective Teacher Self-Efficacy and Burnout: The Mediator Role of Job Satisfaction

Eyüp Yurt <sup>1</sup>

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### Abstract:

This study examined the predictive relationships between collective teacher efficacy, job satisfaction, and burnout. In addition, the mediating role of job satisfaction in the relationship between collective teacher efficacy and burnout was tested. Three hundred fifty teachers participated in the research in which the correlational research design was used. Collective Teacher Efficacy Scale, Short Form Minnesota Satisfaction Questionnaire, and Maslach Burnout Inventory were used as data collection tools. Pearson Correlation Coefficients were calculated to examine the relationships between collective teacher efficacy, job satisfaction, and burnout. Structural equation model analysis was applied to test the mediating role of job satisfaction in the relationship between collective efficacy and burnout. The results indicated that collective teacher efficacy predicts job satisfaction positively and burnout negatively. Collective teacher efficacy and job satisfaction have a large effect on burnout. Evidence has been obtained that teachers' job satisfaction can increase and, accordingly, burnout can be prevented when collective teacher efficacy is achieved.

### Keywords:

Collective teacher self-efficacy, teacher job satisfaction, teacher burnout, mediation analysis.

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<sup>1</sup> Ph.D. Assistant Professor, Bursa Uludağ University, Education Faculty, Bursa, Turkey. eyupyurt@gmail.com, Orcid ID: 0000-0003-4732-6879

## INTRODUCTION

Teachers are the most important actors that ensure the success of education and training activities. The efficiency and effectiveness of educational institutions depend on the performance of teachers. One of the most critical factors affecting teachers' performance negatively is burnout (Hughes, 2001). The sense of burnout causes teachers to feel physically and emotionally exhausted at school (Kyriacou, 2000). It has been observed that teachers' organizational commitment decreases due to the sense of burnout (Akdemir, 2019; Nagar, 2012). Teachers' self-efficacy and professional engagement are negatively affected by burnout (Herman, Hickmon-Rosa & Reinke, 2018; Skaalvik & Skaalvik, 2014). Teachers experiencing burnout have lower perceptions of self-confidence, motivation, self-esteem, and productivity (Larivee, 2012; Gold & Roth, 2013; Marek, Schaufeli & Maslach, 2017). The perception of burnout in teachers was found to be associated with low academic achievement and a lack of motivation in students (Madigan & Kim, 2021). The teaching profession is not a stand-alone profession. Every teacher is part of a professional organization. In this direction, ensuring collective teacher efficacy and increasing job satisfaction may prevent teachers from experiencing burnout.

Studies in the literature have focused more on the relationship between job satisfaction and burnout and teacher self-efficacy. There are limited studies examining the relationship of collective teacher efficacy with job satisfaction and burnout (Aydogmus & Serce, 2021). Collective teacher efficacy was examined more closely together with the school leadership (Cansoy & Parlar, 2018; Flood & Angelle, 2017; Goddard, Goddard, Sook Kim & Miller, 2015; Prelli, 2016). In this study, unlike the studies in the literature, the predictive relationships between collective teacher efficacy, job satisfaction and burnout were examined. In addition, it was tested whether job satisfaction has a mediating role between collective efficacy and burnout. The results obtained can guide practices that will increase cooperation and satisfaction to prevent teacher burnout.

### Burnout

Rapid changes in business life increase expectations for employees. This situation causes employees to experience more stress and burnout over time. Burnout negatively affects the performance of employees (Hughes, 2001). Employees who feel burnout begin to lose their ideals about their work and become alienated from their work (Dworkin, Saha & Hill, 2003). To reduce the negative impact of burnout on employees, it is crucial to understand the symptoms of burnout and the factors associated with it.

Constant fatigue due to overwork, inability to reach the targeted reward, and thus disappointment are the indicators of burnout (Freudenberg, 1980). Excessive demands, an unsuitable work environment, a lack of a fair reward system, and unhealthy relationships in the work environment cause the feeling of burnout. Maslach, Jackson, and Leiter (1997) defined burnout as a syndrome consisting of emotional exhaustion, depersonalization, and

decreased personal accomplishment. Maslach (1982) suggested that not being rewarded for efforts, increased feelings of stress, and frequently encountering unexpected results cause burnout in service sector employees.

There are physical, emotional, and psychological indicators of burnout (Pines, Aronson & Kafry, 1981). Low energy, chronic fatigue, and feelings of exhaustion are indicators of physical burnout. Somatic symptoms of physical burnout include headache, neck and shoulder pain, muscle tension, rapid weight change, eating disorders, and sleep problems. The emotionally exhausted individual believes he is in a dead-end. Anger and frustration are common among individuals experiencing emotional exhaustion (Stanley, 2004). Negative attitudes and behaviors towards one's job, other people, and life, in general, are among the symptoms of psychological exhaustion. The self-esteem of the psychologically depleted individual decreases, and he feels alienated in society. In addition, the person begins to think of himself as a troubled, unsuccessful, and unskilled person who pursues ideals (Powell, 1993).

### *Teacher Burnout*

Employees in the service sector, where human relations are more intense, are more likely to experience burnout (Maslach, 1982). Teachers constitute the most crucial human power that ensures the continuation of the education service. Teachers establish long-term intensive interaction with students, administrators, and parents to continue their education and training activities. In addition, technological developments and changes in education policies require teachers to renew themselves constantly. The increase in expectations for teachers, the excess of extracurricular workload, and unrequited efforts can cause teachers to be closed to the feeling of burnout. In addition, factors such as conflicts with parents, students, and administrators, crowded classrooms and related disciplinary problems, excessive bureaucratic procedures, inadequate physical conditions, political and social pressures, not being able to take part in decision-making bodies, and inability to reward teachers may cause teachers to experience a sense of burnout over time (Kyriacou, 2000).

Increasing demands, failure to meet needs, and the endangerment of physical and mental health due to failures cause teachers to experience burnout (Kyriacou, 2001). The burnout experienced by teachers is manifested in emotional, behavioral, and physical fatigue. Teachers with a sense of burnout show less satisfaction and commitment to their work. He loses interest in his work, duties, and students. Tendency to quit his job. Teachers who experience a sense of burnout feel physically exhausted and tired at school (Kyriacou, 2000).

The feeling of burnout negatively affects the performance of teachers (Hughes, 2001). The fact that teachers feel physically and emotionally exhausted in school indicates burnout (Kyriacou, 2000). The feeling of burnout causes a decrease in teachers' emotional, normative, and continuance commitment (Akdemir, 2019; Nagar, 2012). The sense of professional competence and professional engagement levels of teachers experiencing burnout decrease

(Herman, Hickmon-Rosa & Reinke, 2018; Skaalvik & Skaalvik, 2014). Burnout negatively affects teachers' self-confidence, motivation, self-esteem, and productivity levels (Larivee, 2012; Gold & Roth, 2013; Marek, Schaufeli & Maslach, 2017). Teacher burnout also affects students' academic performance. Low academic achievement and lack of motivation observed in students are associated with teacher burnout (Madigan & Kim, 2021).

### Collective Self-Efficacy

Self-efficacy is an individual's belief in their capacity to complete a task (Bandura, 1997) successfully. When individuals believe in self-efficacy in a particular subject, they tend to make more effort and continue to strive to achieve challenging tasks related to that subject (Kreitner & Kinichi, 2009). When a task is essential to the individual and does not have self-efficacy beliefs for that task, that task turns into a source of anxiety for the individual (Nie, Lau, & Liau, 2011). Because the individual will think that he does not have enough capacity to accomplish the task, not achieving the gains achieved by performing the task will cause anxiety. When the individual believes in self-efficacy for a task that he deems essential, that task is perceived by the individual as a winnable challenge (Bandura, 1997). In this case, the individual is more willing and diligent to complete that task.

An individual becomes an essential part of a group or organization in business life. Individuals within the group cannot work in isolation and social isolation. Group members combine knowledge and skills to achieve common goals (Bandura, 1997). By providing mutual support, members aim for the group to achieve its goals and be successful. The efficacy belief of the members with their duties determines the achievement of the group's goals. According to the social-cognitive theory, efficacy belief occurs both individually and collectively (Bandura, 1993). Successful experiences gained as a group, in-group observations, verbal persuasion, and psychological situations form collective efficacy belief. Collective efficacy reflects the shared belief that a group can effectively organize and implement the thoughts and actions necessary to achieve specific goals (Goddard, Hoy & Woolfolk, 2004).

### Teacher Collective Self-Efficacy

Teachers are the most critical human resources that ensure the progress of education and training services. Teachers and administrators collaborate to train students according to the needs and expectations of society. Collective competence gained in school has the power to affect teachers' motivations, behaviors, and attitudes (Schechter & Tschannen-Moran, 2006). Collective teacher efficacy positively affects students' academic achievement (Bandura, 1993). Teachers who gain collective competence hold themselves more responsible for the success of their students (Schechter & Tschannen-Moran, 2006).

Collective efficacy affects teachers' classroom management skills, teaching methods, and how they motivate students (Tschannen-Moran & Barr, 2004). The success of the common understanding, attitudes, and consultations developed to increase the quality of teaching in the school depends on the belief of collective efficacy. Collective efficacy and

student achievement are in mutual interaction; as one increases, the other increases (Bandura, 2001). Collective efficacy is an important variable that predicts the success differences of schools. In schools with high collective efficacy, students' reading and math achievements are higher (Goddard, Hoy & Hoy, 2000).

Bandura (1997) argued that there are four primary sources of efficacy belief. These sources are personal experiences, vicarious experiences, verbal persuasions, and emotional states. Personal experiences are directly related to the lives of the individual. Successful experiences in a subject strengthen the belief of efficacy on that subject. This situation is also actual for social groups (Goddard, Hoy & Woolfolk, 2004). Teachers can have successful and unsuccessful experiences with their colleagues. The successful results of the school, the placement of students in an excellent high school or a job, the achievement of the school's end-of-year goals, and the successful completion of joint projects can strengthen teachers' belief in collective efficacy. The decrease in student success, increase in disciplinary problems, and disruption of teaching activities can weaken teachers' collective efficacy belief. Collective efficacy belief is influenced by indirect experiences (Bandura, 1997). Observing the successful experiences of different groups with similar characteristics can increase the belief in collective efficacy. The results of a successful school can strengthen the belief that it can be successful in other schools with the same status as itself. Another source that affects collective efficacy belief is verbal persuasions (Bandura, 1997). Motivational talks and in-service training can increase teachers' collective competence. Encouraging speeches appropriate to the abilities of group members can support a belief in collective efficacy. Psychological states are another source that affects collective efficacy belief (Bandura, 1997). The anxiety and stress of the group may weaken the collective efficacy belief.

It has been stated that teachers' self-efficacy beliefs are influential on promotion opportunities, working conditions, job quality, and satisfaction levels with interpersonal relationships (Türkoglu, Cansoy & Parlar, 2017). In a study conducted on teachers working in America, Canada, and Korea, it was observed that teachers' collective efficacy for instructional strategies and student discipline factors positively predicted job satisfaction (Klassen, Usher & Bong, 2010). It has been stated that the attitudes and behaviors of the individuals who make up the school culture (administrators, teachers, parents, staff) affect teachers' job satisfaction through collective teacher efficacy (Caprara et al., 2003). It has been stated that when teachers feel successful in their daily duties at school, their job satisfaction increases (Collie, Shapka & Perry, 2012; Aldridge & Fraser, 2016). Teaching is not a stand-alone profession; every teacher is part of a professional group. Teachers must establish and maintain the necessary relationships with other teachers, administrators, parents, and students to perform effectively and experience job satisfaction (Buonomo, Fiorilli & Benevene, 2020). In this respect, the perception of collective teacher efficacy lays the groundwork for job satisfaction. As the perception of collective efficacy increases, the sense of trust in colleagues also increases (Ware & Kitsantas, 2007). In a school where an

environment of trust is established, it is highly probable that teachers enjoy working and do not experience burnout.

### Teacher Job Satisfaction and Its' Mediator Role

Job satisfaction is an attitude that an individual develops towards their job (Yarım, 2021). Job satisfaction has cognitive, affective, and dynamic indicators (Başaran, 2004). When talking about working conditions, wages, and work plans, the emotional reactions in the individual express job satisfaction (Luthans, 2011). Individuals with high job satisfaction create long-term plans about their job, express their positive feelings about their job, and increase job performance. Being interested in work-related tasks and enjoying the task makes intrinsic job satisfaction. External job satisfaction is the feeling of satisfaction due to the wage, promotion, and reward to be obtained at the end of the job.

As in every profession, job satisfaction in the teaching profession is essential for the profession's sustainability. Teachers feel positive emotions such as pleasure, pride, and happiness while talking about their work shows that they experience job satisfaction. High job satisfaction can increase the prestige of the teaching profession. Job satisfaction contributes to the performance improvement of teachers (Wolomasi, Asaloei & Werang, 2019). Teachers act with a common purpose in educational organizations, participate in decision mechanisms, support each other and achieve successful results can make them feel satisfied on their jobs. Job satisfaction prevents teachers from psychological and physiological wear due to work-related stress (Shann, 1998).

Teachers' satisfaction with their jobs can positively affect all outputs related to educational activities. Teachers who experience job satisfaction are less sensitive to stress and burnout (Kyriacou & Sutcliffe, 1977; Skaalvik & Skaalvik, 2011). This situation can increase teachers' life satisfaction. Studies have shown that the students of teachers who are satisfied with their jobs also feel better in the school environment (Collie, Shapka & Perry, 2012; Spilt, Koomen & Thijs, 2011). Teachers with job satisfaction increase the quality of teaching at school and provide better learning support to students (Klusmann, Kunter, Trautwein, Lüdtke & Baumert, 2008; Kunter et al., 2013). Teachers who are satisfied with their jobs are more committed and have a lower tendency to leave the profession (Blömeke, Houang, Hsieh & Wang, 2017; Klassen & Chiu, 2011). Collaboration between teachers can increase student and school success. This situation causes teachers to experience job satisfaction, making them more resistant to stress and burnout.

### The Present Study

Studies have shown that collective teacher efficacy, job satisfaction, and burnout are related to each other (Aydogmus & Serce, 2021; Buonomo, Fiorilli & Benevene, 2020; Klassen, Usher & Bong, 2010). There are limited studies in the literature that deal with these variables together (Aydogmus & Serce, 2021). Aydogmus and Serce (2021) investigated the regulatory role of collective teacher efficacy in the effect of job satisfaction and satisfaction with life on professional burnout. In addition, it has been observed that studies in the

literature focus more on the relationship between job satisfaction and burnout and teacher efficacy (Hassan & Ibourk, 2021; Malinen & Savolainen, 2016; Sokmen & Kilic, 2019). More studies are needed to address the relationship of collective teacher efficacy with these variables. It is known that the perception of collective efficacy increases the cooperation among teachers on teaching and discipline (Tschannen-Moran & Barr, 2004). Depending on the collective efficacy, teachers can be more satisfied with the work environment, have less conflict with their colleagues, and increase their willingness to continue their profession. Teachers who are satisfied with their jobs have a higher organizational commitment and tendency to continue their profession (Klassen & Chiu, 2011). Teachers' satisfaction with their jobs can make them more resistant to feelings of stress and burnout related to their profession. Based on the research and institutional explanations, it is estimated that collective teacher efficacy increases job satisfaction and indirectly reduces burnout. In line with this expectation, the predictive effect of collective teacher efficacy on job satisfaction and burnout was investigated in this study. In addition, it was tested whether job satisfaction had a mediating role in the relationship between collective teacher efficacy and burnout. This way, a better understanding of the relationships between collective efficacy, job satisfaction, and burnout can be achieved. The results obtained can guide the practices to be developed to prevent teacher burnout. Three hypotheses were formulated based on prior studies.

H1: Collective teacher efficacy predicts teacher burnout negatively.

H2: Collective teacher efficacy predicts job satisfaction positively.

H3: Job satisfaction has a mediating role in the relationship between collective teacher efficacy and teacher burnout.

## METHOD

### Research Model

A correlational research design was used in this study. In correlational studies, the relationships between two or more variables are examined without intervention. In this research design, cause-effect relationships are not established between the variables, and the co-change of the variables is tried to be understood. The coefficients of the calculated relationships allow researchers to predict some results (Büyüköztürk et al., 2008). By the correlational research design, the predictive relationships between teachers' collective self-efficacy perceptions, job satisfaction, and professional burnout were examined in this study.

### Participants

Three hundred fifty teachers participated in this research. To reach the teachers, the convenience sampling method was preferred. Since it is challenging to collect face-to-face data during the Covid-19 pandemic, the data were obtained by online survey technique. Participants were informed about the study, and it was stated that volunteering was

essential in participating in the research. The teachers work at primary school (36.3%), secondary school (26.8%), and high school (36.9%). 50.6% of the teachers are female, and 49.4% are male. The rate of married teachers is 83.7%. 77.4% of the teachers are undergraduate, and 22.6% are postgraduate graduates. The ages of the teachers range from 27 to 62. The mean age was calculated as 39.41 (SD=8.17). The professional seniority of teachers varies between 3 and 35 years. Average seniority was calculated as 14.51 years (SD=8.10).

**Table 1**

*The Distribution of Participants by Demographic Characteristics*

	f	%
Gender		
Female	177	50.6
Male	173	49.4
School		
Primary	127	36.3
Secondary	94	26.8
High	129	36.9
Marital status		
Single	57	16.3
Married	293	83.7
Education level		
Undergraduate	271	77.4
Postgraduate	79	22.6

## Measures

**Collective Teacher Efficacy Scale:** The scale was developed by Tschannen-Moran and Barr (2004). The adaptation of the measurement tool to Turkish culture was carried out by Erdoğan and Dönmez (2015). Consisting of 12 items, the scale is 5-point Likert type (never=1, little=2, moderate=3, a lot=4, and totally=5). The scale has two dimensions: student discipline and teaching strategies. There are six items in both dimensions. High scores obtained from the scale indicate that the perception of collective teacher efficacy is high.

The compatibility of the two-factor structure of the collective teacher efficacy scale with the available data was investigated by applying the second-level confirmatory factor analysis. Calculated fit values ( $\chi^2=177.05$ ,  $\chi^2/df=3.47$ , GFI=0.92, AGFI=0.87, TLI=0.93, CFI=0.95, IFI=0.95, SRMR=0.05, RMSEA=0.08) indicated perfect fit between the data and the two-factor model (Bollen, 1989; Browne & Cudeck, 1993; Jöreskog & Sörbom, 1984;

McDonald & Marsh, 1990). The factor loads of the items in the scale ranged from 0.62 to 0.84. Factor loadings were found to be significant at each 0.001 level. The alpha coefficients calculated for student discipline and teaching strategies were 0.89 and 0.85, respectively.

Short Form Minnesota Satisfaction Questionnaire (SFMSQ): The scale was developed by Weiss, Dawis, and England (1967). The scale, consisting of 20 items, is a 5-point Likert type (not at all satisfied=1, not satisfied=2, undecided=3, satisfied=2, very satisfied=1). The scale has two dimensions: internal and external job satisfaction. Internal job satisfaction consists of twelve items, and external job satisfaction consists of eight items. High scores from the scale indicate high job satisfaction.

The compatibility of the two-factor structure of the job satisfaction scale with the available data was investigated by applying the second-level confirmatory factor analysis. Calculated fit values ( $\chi^2=478.57$ ,  $\chi^2/df=2.97$ , GFI=0.87, AGFI=0.85, TLI=0.90, CFI=0.91, IFI=0.91, SRMR=0.07, RMSEA=0.08) indicated acceptable fit between the data and the two-factor model (Bollen, 1989; Browne & Cudeck, 1993; Jöreskog & Sörbom, 1984; McDonald & Marsh, 1990). The factor loads of the items in the scale ranged from 0.48 to 0.81. Factor loadings were found to be significant at each 0.001 level. The alpha coefficients calculated for the internal and external job satisfaction were calculated as 0.87 and 0.85, respectively.

Maslach Burnout Inventory: The Inventory was developed by Maslach and Jackson (1985). The adaptation of the inventory to Turkish culture was carried out by Engin (1992). The 22-item scale is 5-point Likert type (never=1, very rarely=2, sometimes=3, often=4, and always=5). The inventory has three dimensions: emotional exhaustion, depersonalization, and reduced personal achievement. Emotional exhaustion consists of eight items, depersonalization consists of six items, and reduced personal achievement consists of eight items. High scores from the scale indicate a high sense of burnout.

The compatibility of the three-factor structure of the burnout inventory with the available data was investigated by applying the second-level confirmatory factor analysis. Calculated fit values ( $\chi^2=426.87$ ,  $\chi^2/df=2.36$ , GFI=0.90, AGFI=0.87, TLI=0.92, CFI=0.93, IFI=0.93, SRMR=0.08, RMSEA=0.06) indicated acceptable fit between the data and the three-factor model (Bollen, 1989; Browne & Cudeck, 1993; Jöreskog & Sörbom, 1984; McDonald & Marsh, 1990). The factor loads of the items in the inventory ranged from 0.40 to 0.92. Factor loadings were found to be significant at each 0.001 level. The alpha coefficients calculated for emotional exhaustion, depersonalization, and reduced personal achievement were 0.92, 0.72, and 0.78, respectively.

### Procedure

The questionnaire form was prepared online. Necessary permissions and ethics committee approval were obtained for the application of the questionnaire. The questionnaire link was shared with the school administrators so that the teachers could access the questionnaire. Information about the purpose of the study is given on the first page of the questionnaire. It has been stated that the questionnaire data will be used for

scientific purposes and that participation in the survey is voluntarily. The completion time of the questionnaire takes approximately 10 minutes.

### Ethical Considerations

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

Ethical review board name: Bursa Uludağ University Ethics Committee

Date of ethics review decision: 25.02.2022

Ethics assessment document issue number: 02-2022/49

### Data Analysis

The skewness and kurtosis coefficients were used to examine the distribution of collective efficacy, job satisfaction, and burnout scores. The skewness and kurtosis coefficients in the range of  $\pm 1$  indicate that the data are distributed close to normal (Tabachnick & Fidell, 2007). The calculated coefficients were within the specified range (Table 2).

**Table 2**

#### *Skewness and Kurtosis Coefficients*

Variables	Skewness		Kurtosis	
	Statistic	SD	Statistic	SD
Teaching strategies	-0.11	0.13	-0.35	0.26
Student discipline	-0.18	0.13	-0.25	0.26
Emotional exhaustion	0.47	0.13	-0.49	0.26
Depersonalization	0.81	0.13	0.43	0.26
Reduced personal achievement	0.29	0.13	-0.01	0.26
Internal job satisfaction	-0.58	0.13	0.51	0.26
External job satisfaction	-0.30	0.13	-0.40	0.26

Pearson Correlation Coefficients were calculated to examine the relationships between collective teacher efficacy, job satisfaction, and burnout scores. Structural equation model analysis was applied to test the mediating role of job satisfaction in the relationship between collective efficacy and burnout. The Bootstrap method was used to test the mediation role. For the mediating effect to occur in this method, i) the total effect of the independent variable on the dependent variable must be significant, ii) the indirect effect must be statistically significant, and iii) VAF (Variance Accounted For= indirect effect/total effect\*100) value greater than 80%, in a range of 20% to 80%, and below 20% is considered full mediation, partial mediation, and no mediation, respectively (Hair et al., 2014).

Cook distance values were calculated, and it was examined whether there were outliers in the data set that made the normal distribution difficult. Cook distance  $>1$  values

indicate that there are outliers in the data set (Steven, 2002). The results obtained showed that there were no extreme values in the data set. To control the assumption of multivariate normal distribution, Mardia's multivariate standardized kurtosis coefficient was calculated. The fact that this coefficient is less than 8 indicates that the data have a multivariate normal distribution (Mardia, 1970). The calculated coefficient (Mardia's multivariate kurtosis coefficient=6.13) showed that the assumption of multivariate normal distribution was met. In the next step, the existence of a multicollinearity problem between the factors was investigated by calculating the correlation coefficients. High-level relationships ( $r > 0.90$ ) indicate multicollinearity (O'brien, 2007). The calculated correlation coefficients were examined and it was determined that there was no multicollinearity between the factors. Analyzes were performed using SPSS 25.0 and AMOS 24.0 statistical package programs.

## RESULTS

### Correlation Analysis Results

Pearson Correlation Coefficients were calculated to examine the relationships between collective teacher efficacy, job satisfaction, and burnout scores. The results obtained are given in Table 3.

**Table 3**

*Pearson Correlation Coefficients*

Variables	1.	2.	3.	4.	5.	6.	7.
1. Teaching strategies	1						
2. Student discipline	0.79**	1					
3. Emotional exhaustion	-0.28**	-0.33**	1				
4. Depersonalization	-0.15**	-0.22**	0.50**	1			
5. Reduced personal achievement	-0.11*	-0.13*	0.32**	0.21**	1		
6. Internal job satisfaction	0.29**	0.34**	-0.66**	-0.36**	-0.32**	1	
7. External job satisfaction	0.35**	0.36**	-0.58**	-0.28**	-0.17**	0.75**	1
M	3.32	3.50	2.30	2.12	2.03	3.86	3.25
SD	0.61	0.60	0.84	0.49	0.45	0.62	0.83

\*\* $p < 0.01$ , \* $p < 0.05$ ; N=350

Table 3 shows that collective teacher efficacy for teaching strategies was negatively correlated with emotional exhaustion ( $r = -0.28$ ,  $p < 0.01$ ), depersonalization ( $r = -0.15$ ,  $p < 0.01$ ), reduced personal achievement ( $r = -0.11$ ,  $p < 0.05$ ). On the other hand, collective teacher efficacy for teaching strategies was positively correlated with internal job satisfaction ( $r = 0.29$ ,  $p < 0.01$ ) and external job satisfaction ( $r = 0.35$ ,  $p < 0.01$ ).

Collective teacher efficacy for student discipline was negatively correlated with emotional exhaustion ( $r = -0.33$ ,  $p < 0.01$ ), depersonalization ( $r = -0.22$ ,  $p < 0.01$ ), reduced personal achievement ( $r = -0.13$ ,  $p < 0.05$ ). On the other hand, collective teacher efficacy for student discipline was positively correlated with internal job satisfaction ( $r = 0.34$ ,  $p < 0.01$ ) and external job satisfaction ( $r = 0.36$ ,  $p < 0.01$ ).

Emotional exhaustion was negatively correlated with internal job satisfaction ( $r=-0.66$ ,  $p<0.01$ ) and external job satisfaction ( $r=-0.58$ ,  $p<0.01$ ). Depersonalization was negatively correlated with internal job satisfaction ( $r=-0.36$ ,  $p<0.01$ ) and external job satisfaction ( $r=-0.28$ ,  $p<0.01$ ). Reduced personal achievement was negatively correlated with internal job satisfaction ( $r=-0.32$ ,  $p<0.01$ ) and external job satisfaction ( $r=-0.17$ ,  $p<0.01$ ).

### Mediator Analysis Results

Structural equation model analysis was performed to test the mediating role of job satisfaction in the relationship between collective teacher efficacy and burnout (Figure 1). In the model, collective teacher efficacy was the independent variable, burnout was the dependent variable, and job satisfaction was the mediating variable. The calculated fit values ( $\chi^2=34.15$ ,  $\chi^2/df=3.10$ , GFI=0.97, AGFI=0.93, TLI=0.95, CFI=0.97, IFI=0.98, SRMR=0.04, RMSEA=0.08) indicated perfect fit between the data and the structural model. (Bollen, 1989; Browne & Cudeck, 1993; Jöreskog & Sörbom, 1984; McDonald & Marsh, 1990). Path coefficients for direct and indirect effects are displayed in Table 4.

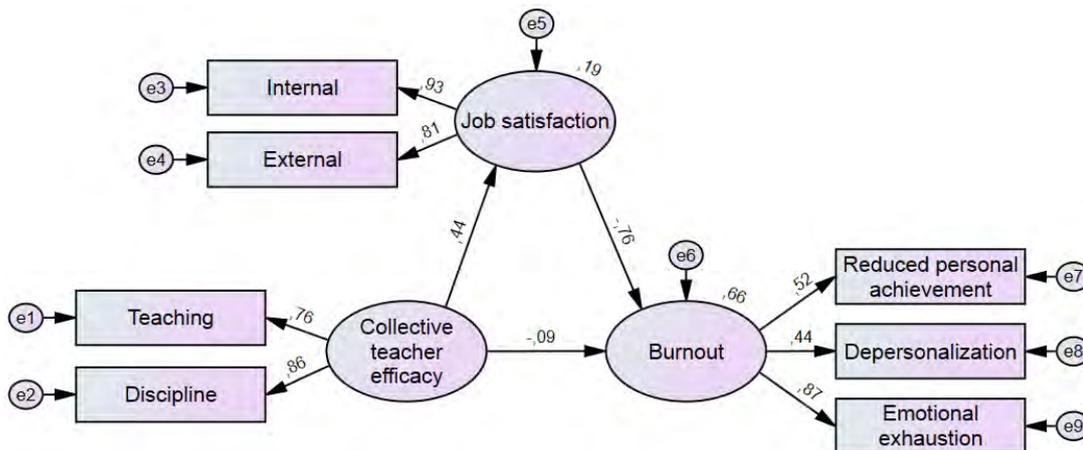


Figure 1. The Structural Equation Model Tested to Examine the Mediator Role of Job Satisfaction

Table 4

Total, Direct and Indirect Effects

			$\beta$	SE	p	LLCI	ULCI
Total Effect							
Collective teacher efficacy	---	Burnout	-0.44	0.04	***	-0.57	-0.29
Direct Effects							
Collective teacher efficacy	---	Job satisfaction	0.44	0.08	***	0.31	0.55
Job satisfaction	---	Burnout	-0.76	0.04	***	-0.89	-0.65
Collective teacher efficacy	---	Burnout	-0.09	0.04	0.11	-0.24	0.06
Indirect Effect							
Collective teacher efficacy	---	Burnout	-0.35	0.06	***	-0.46	-0.22

\*\*\* $p<0.001$ , LLCI= Lower limit of confidence interval, ULCI= Upper limit of confidence interval

When Table 4 is examined, it is understood that the total effect of collective teacher efficacy on burnout was statistically significant ( $\beta=-0.44$ ,  $p<0.001$ , 95% CI [-0.57, -0.29]). Collective teacher efficacy negatively predicted burnout.

When the direct effects were examined, the direct effect of collective teacher efficacy on job satisfaction was found to be statistically significant ( $\beta=0.44$ ,  $p<0.001$ , 95% CI [0.31, 0.55]). Collective teacher efficacy positively predicted job satisfaction. The direct effect of job satisfaction on burnout was statistically significant ( $\beta=-0.76$ ,  $p<0.001$ , 95% CI [-0.89, -0.65]). Job satisfaction negatively predicted burnout. The direct effect of collective teacher efficacy on job satisfaction was not statistically significant ( $\beta=-0.09$ ,  $p=0.11$ , 95% CI [-0.24, 0.06]). Collective teacher efficacy and job satisfaction explained 66% of the change in burnout.

When the indirect effects are examined, the indirect effect of collective teacher efficacy on burnout was statistically significant ( $\beta=-0.35$ ,  $p<0.001$ , 95% CI [-0.46, -0.22]). Collective teacher efficacy negatively predicted burnout through job satisfaction. The results indicated that job satisfaction has a partial mediating role in the relationship between collective teacher efficacy and burnout (VAF= 80%).

## DISCUSSION

In this study, the predictive relationships between teachers' collective efficacy, job satisfaction, and feelings of burnout were examined. In addition, the mediating role of job satisfaction in the relationship between collective teacher efficacy and burnout was tested. It was determined that collective teacher efficacy predicted job satisfaction positively and burnout negatively. It has been observed that job satisfaction has a partial mediating role in the relationship between collective efficacy and burnout.

According to the results obtained in the research, collective teacher efficacy predicts job satisfaction positively. This result supported the studies stating that collective efficacy increases teachers' job satisfaction (Caprara et al., 2003; Klassen, Usher & Bong, 2010; Türkoglu, Cansoy & Parlar, 2017; Vatou & Vatou, 2019). Collective teacher efficacy is the sum of teachers' beliefs in their capacity to regulate and manage educational goals to increase student achievement (Goddard, Hoy & Woolfolk-Hoy, 2004). In schools with high collective teacher efficacy, teachers believe that their combined efforts can have a positive impact on students (Goddard, Hoy & Woolfolk Hoy, 2000). Teachers working in schools with a high responsibility for collective learning serve both to better the learning of students and to create a more socially just school environment (Lee & Smith, 1996). Collective teacher efficacy creates a working environment that increases parent-student interaction and school engagement (Brison & Steiner, 2007). It is known that collective efficacy increases cooperation among teachers on teaching and discipline (Tschannen-Moran & Barr, 2004). It can be said that a positive working environment is created in schools when collective teacher competence is provided to this information. In such an environment, teachers are satisfied with their work environment and their colleagues; job satisfaction is expected.

Another result obtained in the study is that collective teacher efficacy predicts burnout negatively. When teachers believe that their combined efforts can have a positive effect on students, they are less likely to experience burnout. This result is consistent with the results of studies stating that collective teacher efficacy reduces teachers' feelings of burnout (Aydogmus & Serce, 2021; Lim & Eo, 2014). Bandura (1997) stated that self-efficacy belief affects the way an individual perceives the elements that pose a threat to himself. When individuals believe that they can accomplish a task, that task is perceived by individuals as a struggle that can be won. When individuals think that they cannot achieve a task, that task turns into a source of stress and anxiety by individuals. Ensuring collective teacher efficacy in a school can enable teachers to perform their duties successfully without experiencing stress and anxiety. This situation reduces the possibility of teachers experiencing burnout. Collective teacher efficacy increases the feeling of trust in colleagues (Ware & Kitsantas, 2007). In a school where trust is created, it is highly probable that teachers will enjoy working and will seek to continue their profession.

In this study, it was observed that job satisfaction has a partial mediating role in the relationship between collective efficacy and burnout. Collective teacher efficacy negatively predicted the sense of burnout through job satisfaction. Evidence has been obtained that teachers' job satisfaction can increase and, accordingly, burnout can be prevented when collective teacher efficacy is achieved. Although teaching is seen as a stand-alone profession, every teacher is part of a professional group at school. For the school to achieve its goals, teachers, students, administrators, and parents act together. In schools with high collective teacher efficacy, teachers set vital goals. They make more effort and take more responsibility to achieve these goals (Goddard, 2001, Tschannen-Moran & Barr, 2004). Effective performance and job satisfaction of teachers depend on establishing and maintaining the necessary relationships with colleagues, administrators, parents, and students (Buonomo, Fiorilli & Benevene, 2020). When collective efficacy is achieved, teachers can perform their tasks more efficiently and collaborate with their colleagues to solve problems. Based on these explanations, it can be said that collective efficacy paves the way for teachers to do their jobs with pleasure and to increase their job satisfaction. Teachers who are satisfied with their jobs are more committed to their jobs and have a lower tendency to leave the profession (Blömeke, Houang, Hsieh & Wang, 2017; Klassen & Chiu, 2011). Teachers who experience job satisfaction are likely to minimize the negativities related to their profession. It can be expected that these teachers will be more resistant to feelings of stress, anxiety, and burnout related to their careers.

## CONCLUSION

Collective teacher efficacy and job satisfaction explained a large proportion of the variation in teacher burnout. These variables have a significant effect on teacher burnout. Increasing collective teacher efficacy in schools and providing working conditions that will create job satisfaction can prevent teacher burnout. For this, mutual support regarding the learning and teaching processes within the school should be increased; joint decisions

should be taken and implemented. The awareness of school administrators on collective teacher efficacy can be improved. STEM-like projects can be developed to increase the cooperation of teachers.

### LIMITATIONS AND RECOMONDATIONS

Primary, secondary, and high school teachers participated in this research. Similar studies can be conducted with a larger sample, including teachers from different branches, such as pre-school and special education. There is a limited number of studies in the literature examining the relationship between collective teacher efficacy and burnout. More studies can be conducted to examine the relationships between these variables. More complex models can be tested by considering different variables such as job stress, administrator feedback, school climate, social support, and student motivation, which can mediate the relationship between collective teacher efficacy and burnout levels.

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### Biographical notes:

**Eyüp Yurt:** He works as a researcher at Bursa Uludağ University, Faculty of Education. He is married and has three children. He is interested in education statistics. His research interests include teacher education, self-efficacy, spatial ability, academic motivation, expectancy-value theory.

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