

TEACHER ACCOUNTABILITY FOR TEACHER OCCUPATIONAL PROFESSIONALISM: THE EFFECT OF ACCOUNTABILITY ON OCCUPATIONAL AWARENESS WITH THE MEDIATING ROLES OF CONTRIBUTION TO ORGANIZATION, EMOTIONAL LABOR AND PERSONAL DEVELOPMENT

Rabia Öztuzcu Küçükbere¹
Betül Balkar²✉

¹Ministry of National Education,
Turkey

²Çukurova University, Turkey

✉ bbalkar@cu.edu.tr

ABSTRACT

Accountability enables teachers to exhibit professional behaviors in school processes. However, the contribution of accountability to teacher occupational professionalism depends on the effective structuring of accountability mechanisms. It is necessary to examine how the connection between teacher occupational professionalism and accountability can be effectively established in line with different conceptual models. Therefore, this study investigated the relationship between teacher accountability and occupational professionalism by analyzing a proposed conceptual model of accountability and occupational professionalism dimensions. The first step for effective accountability mechanisms is to raise occupational awareness. Therefore, the effect of teacher accountability on teacher occupational awareness, which is one of the components of occupational professionalism, was examined with the mediating roles of contribution to organization, emotional labor and personal development dimensions of occupational professionalism. Employing correlational research design, the study sample included 576 middle school teachers from Gaziantep province in the southeast of Turkey. The study revealed that contribution to organization and emotional labor play a partially mediating role in the relationship between accountability and occupational awareness. However, teacher personal development has no mediating role. The results present a framework to develop teacher personal accountability supporting teacher occupational professionalism.

KEYWORDS

Accountability, middle school teachers, occupational awareness, occupational professionalism

HOW TO CITE

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Highlights

- Teacher accountability is related to the teacher occupational professionalism.
- Emotional labor and the contribution to the organization mediate the relationship between accountability and occupational awareness.
- Personal development is not a mediator in the relationship between accountability and occupational awareness.

INTRODUCTION

The occupational quality of teachers is one of the most effective factors shaping education systems. Hence, teachers should structure their occupational implementations in a professional manner in order to develop their occupational quality and performance. The professionalism of teachers in education and instruction processes requires that they act in accordance with accountability.

Teacher accountability movement is one of the most debated and important topics of modern educational reforms. Teachers with low quality performance lead to insufficient school performance. Lack of accountability and control in schools is the primary reason underlying the issue related to low-performing teachers. The solution for the advocates of the modern educational reform movement is making teachers more accountable (Ingersoll and Collins, 2017). Hodgetts (2010) points out that the accountability of teachers is emphasized through the focus on performance in modern education systems.

The definition of accountability determines how the occupational professionalism of teachers is structured (Poulson, 1998). In this study, accountability is considered as a mechanism that ensures the professional development of teachers and thus improving professional performance. It is included in education systems for supporting the professional development of teachers and guaranteeing the necessary occupational inputs (Jensen et al., 2016). Its contribution to the improvement of teacher occupational professionalism enabling professional development has increasingly drawn more attention in terms of the success of education systems. At this point, occupational awareness which is a component of occupational professionalism is a prerequisite since it reflects teachers' cognitive and psychological readiness at the individual level for both accountability and professionalism. In this study, teacher accountability is considered based on self-accountability including professional self-assessments of teachers. Therefore, it is deemed that occupational awareness appears in a key position for teachers to take responsibility for their duties and to work with a more professional understanding. Educational policies intended to improve the interaction between answerability of teachers and expected competences from teachers aim at increasing occupational awareness of teachers in school processes. Therefore, it is important to examine the relationship between teacher accountability and occupational professionalism especially based on occupational awareness through different theoretical models for the successful design and implementation of these educational policies. For this purpose, the aforementioned relationship was analyzed through a proposed model in which occupational professionalism is divided into its dimensions in order to develop a different perspective in this study.

In this study, the effect of teacher accountability on teacher occupational awareness which is one of the components of occupational professionalism was examined with the mediating roles of contribution to organization, emotional labor and personal development which are other components of teacher occupational professionalism. The research questions of the study are as follows:

1. Is there a significant relationship between middle school teachers' accountability and their occupational professionalism?
2. Do the contribution to organization, emotional labor and personal development mediate the effect of middle school teachers' accountability on their occupational awareness?

The following parts of the study respectively include a theoretical foundation concerning the relationship between teacher accountability and professionalism and the conceptual framework on which the model proposed in the study is based.

Teacher Accountability and Occupational Professionalism

Accountability is required in order to consider an occupation as professional and its implementations that are put into practice in different ways make up a distinctive characteristic of professionalism (Maphosa et al., 2012). Hence, teacher accountability is an inseparable part of teacher professionalism. However, an accountability system should take place along the axis of professionalism. Otherwise, a system that is harmful rather than supportive will emerge in terms of occupational professionalism.

Poulson (1998) classifies accountability as internal and external. External accountability is delivered through a contractual mandate and inspection. Whereas internal accountability represents the self-regulation in which teachers consider themselves as professionally responsible. Accountability of teachers can be organized through systems of external assessment, while it can also be attained personally. The essence of the teaching profession brings forth the concept of personal accountability (Sahu, 2018). In the present study, accountability of teachers is evaluated as part of internal (personal) accountability and therefore the understanding that it points out self-assessment of teachers regarding their professional implementations is adopted in the study. As a framework reflecting this understanding, Arslan Durmuş (2016) indicates teacher accountability includes five dimensions named duty and responsibility, obstacles, expectations and communication. She explains these dimensions in this framework as follows: the things teachers do to fulfill their duties and responsibilities in a proper manner and their ability to explain the consequences of their responsibilities are defined as the accountability with regard to their *duties and responsibilities*. The requirements of teachers concerning school and assessment processes in order to ensure accountability make up their *expectations*. Factors that either prevent or make it more difficult for teachers to be accountable for their applications are expressed as *obstacles* related to accountability. Whereas *communication* indicates the support by the communication structure in schools and the communication between teachers and school administration for ensuring the accountability of teachers. Consequently, teacher accountability includes not only ensuring transparency in job-related processes, but also the awareness of opportunities that support professional development and practices, and the threats that limit them.

Teachers' being accountable in education is generally considered as a part of the occupational professionalism of teachers (Poulson, 1998). According to Møller (2009), professional accountability emphasizes that teachers are aware

of the needs of the students and their parents as well as the society they live in. He states that it requires the acquisition and implementation of the knowledge and skills necessary for successful professional applications. In addition, it also includes a commitment to place the needs of the students at the center, cooperate and share information (Møller, 2009). At the individual level, it is based on the concept of responsibility for meeting the standards. Therefore, individual accountability can be used to predict the work performance of teachers (Rosenblatt, 2017). As a result, teachers' being accountable shows itself as professionalism and accordingly professional performance in school processes.

Teacher professionalism encompasses factors such as having sufficient subject knowledge and pedagogic knowledge, commitment to continuous improvement and maintaining responsibilities in the work environment (Sockett, 1993). Yılmaz and Altinkurt (2014) put forth that the occupational professionalism of teachers is comprised of contribution to organization, emotional labor, personal development and occupational awareness and explained these dimensions further as follows: following publications related to their fields for professional development and taking part in professional development activities are related with the *personal development* of teachers. Teachers who *contribute to organization* use their knowledge and skills voluntarily for the improvement and success of the school. Teachers with *occupational awareness* strive to be successful in their professions and to set an example for their students. In the meantime, they are open to innovations and change. Whereas *emotional labor* enables teachers to prevent themselves from carrying over their problems to the professional environment and to control their emotions. Consequently, occupational professionalism of teachers is considered as showing the necessary performance and emotional effort for the development of their schools and students, and attaching importance to their own personal development, showing the framework adopted in the present study.

The attainment and improvement of teacher professionalism are related to the teachers' having required personal and occupational competence. A professional teacher should have high standards as well as high expectations for themselves and their colleagues (Tichenor and Tichenor, 2005). Therefore, implementations based on personal accountability are considered effective tools for ensuring the effective occupational performance of teachers as well as for their professionalism. Systems with answerability standards and formulated principles of working culture may strengthen the roles played by teachers as autonomous professionals by providing internally guiding approaches for them (Smith and Persson, 2016). Teachers' feeling responsible for their work and working in a professional manner can mutually support each other under suitable conditions. Since the professional development of teachers is part of the accountability system, accountability supports teachers to focus on a professional goal (Hochberg and Desimone, 2010). Moreover, teacher professionalism indicates the responsibility of teachers with regard to student development and their own professional development, accordingly, this situation points to the fact that professionalism supports accountability (Wang, Lai and Lo, 2014).

The Effect of Accountability on Occupational Awareness with the Mediating Roles of Contribution to Organization, Emotional Labor and Personal Development

Increased attention of teachers to the processes and events that take place in schools is of special importance with regard to contributing to their professional development and thus their occupational professionalism (Price and Weatherby, 2018). In other words, the occupational professionalism of teachers is improved when they have greater occupational awareness. Teachers who are aware of their requirements, who are in good communication and cooperation with their colleagues and who strive to do their job as best as they can have high occupational awareness (Çelik and Yılmaz, 2015). Considering teaching as knowledge expertise makes it necessary for teachers to work as knowledge workers and to improve and renew their knowledge and skills continuously (Schleicher, 2012). However, lack of sufficient feedback received by teachers from the assessments in schools and insufficient collaboration with their colleagues slow down the development of their professional capital (Hargreaves and Fullan, 2012) and accordingly awareness towards professional issues. At this point, accountability serves as a mechanism to develop the professionalism of teachers based on occupational awareness by providing feedback concerning school- and job-related processes. Teachers' being aware of teaching profession necessities is of special importance with regard to establishing the foundation for teachers to act professionally and have a tendency for being accountable.

The occupational awareness level of teachers may vary subject to contextual factors as well as their personal and professional factors including attitudes and behaviors. The effect of accountability on occupational awareness may be therefore strengthened or weakened depending on these factors. At this point, teacher behaviors related to dimensions of occupational professionalism such as contributing to the organization, displaying emotional labor and personal development may play a mediating role in the shaping of the occupational awareness of teachers together with their accountabilities.

The performance of teachers concerning job-related processes is either positively or negatively affected by personal and environmental factors. Teachers cannot always control events that are not directly related to themselves. Hence, it is of special importance that teachers develop emotional labor strategies. These strategies help teachers with the factors preventing desired occupational performance and causing problems in the educational environment. Emotional labor is centrally located in teaching performance (Yin, 2015). The emotional labor of teachers stems from the nature of the work they perform and plays an important role in increasing the performance of teachers (Zaretsky and Katz, 2019). Teaching satisfaction is remarkably related to emotional labor of teachers (Huang, Yin and Han, 2019). Deep acting and fake emotions of teachers within the scope of the emotional labor strategies of teachers are important with regard to making an impact on student output (Burić, 2019). Deep acting enables experiencing positive emotions thus reflecting on the class management effectiveness of teachers (Lee and van Vlack, 2018). It also enhances the intrinsic motivation of teachers (Truta, 2014). Therefore, teachers' ability to show emotional labor requires

awareness of situations and requirements concerning teaching and school.

The occupational awareness of teachers may increase when teachers suitably exert emotional labor contributing to their accountability to maintain their occupational performance at the desired level and to properly manage the relationships in school. The emotions of teachers also depend on subjective assessments related to situations (Becker et al., 2015). As a result, the fact that teachers having a thorough understanding of accountability can make more accurate evaluations concerning their emotions may be effective in the development of their awareness of occupation and professionalism.

Teachers' attitudes toward improving personal development constitute an important aspect of their professionalism that requires a high awareness of occupation. Occupational qualities and development are included among the factors supporting teachers to work professionally (Toh et al., 1996). According to Mustafa et al. (2013), there is a strong relationship between personal development and personal awareness. Awareness of teachers is an important indicator that improves the quality of education (Buettner et al., 2016). Therefore, teachers' efforts for personal development and their awareness towards educational processes reinforce each other. Teachers' personal development can be formed based on their responsibility for the teaching profession which is also considered within the scope of teacher accountability (Kanika, 2016). The definition of the concept of professionalism changes over time and takes on a different context (Moore and Clarke, 2016). In this context, evaluation of competences of professionals in the public service indicating their professional development also plays a role in improving accountability (Watson and Fox, 2015). Accordingly, teachers' being responsible for their professional implementations may raise their awareness of professional issues by stipulating personal development in the teaching profession.

Teaching is a profession that requires expertise and continuous development. Therefore, quality teaching depends on the continuous self-development of teachers (Yılmaz and Altinkurt, 2014). The continuous development of teachers lays the foundation for them to contribute to the organization they work for. Professionalism in the teaching profession requires working with colleagues in school and collaborating with other stakeholders of education (Department for Education and Employment [DfEE], 1998). Teachers who show these professional behaviors can also contribute to their schools. Teachers' efforts to contribute to organization for the improvement depend on ensuring that they participate in school and administration processes (Weingarten, 2012). When it comes to teachers' contributions to their schools except for contributions to the teaching process, expected teacher behaviors generally include participation in school administration processes and assuming a leading role. Schools that encourage teacher accountability and especially teacher leadership at the same time have better performance (Ingersoll, Sirinides and Dougherty, 2018). Therefore, teachers who participate in school-related processes and those who assume the role of leaders in consequence of their occupational awareness contribute to their organizations while also becoming more accountable. Teachers' awareness of job- and school-related issues makes their professional learning easier in teaching and school processes. Since

occupational responsibility and self-development are included together in professional learning (Watson and Michael, 2016), accountability enables the improvement of teachers' performance quality (Dizon-Ross, 2018) as an indicator of contributions to their schools. In other words, teachers' being responsible for both school and personal development enables teachers to develop their occupational awareness and thus occupational performance. The conceptual framework created based on the described theoretical foundation is presented in Figure 1.

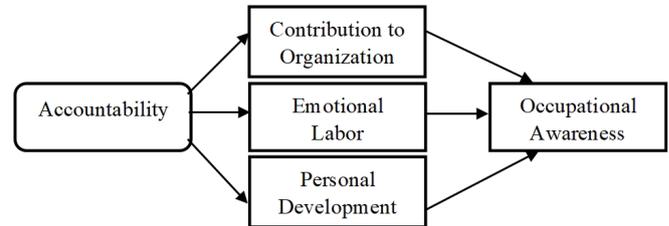


Figure 1: Conceptual framework of the relationships between accountability, dimensions of occupational professionalism (contribution to organization, emotional labor and personal development) and occupational awareness dimension of occupational professionalism

MATERIALS AND METHODS

This correlational study explores the relationships between teacher accountability and occupational professionalism. A mediation analysis of the Structural Equation Modeling (SEM) for the structural proposed model is also conducted. SEM is an analysis method defined as a combination of different statistical methods. It includes regression analysis in terms of defining causality relationships between variables (Tabachnick and Fidell, 2007). The main purpose of SEM is to test a causal model (Jöreskog, 1970). According to Tarka (2018: 314–318), the foundations of SEM lie in the Spearman's factor models and Wright's path analysis. In later periods, the methodological concepts of SEM were included in the publications of Jöreskog (1970), Keesling (1972) and Wiley (1973), however, Jöreskog (1973) has been mostly mentioned with the first developed SEM model (as cited in Tarka, 2018: 318).

SEM is a multivariate technique in which a structural model including hypotheses about relationships among different variables is tested (Stephan and Friston, 2009). The specification of a model is the first step of SEM. A model tested through SEM includes statistical hypotheses concerning the relationships between variables (Hoyle, 1995). SEM allows the examination of both direct and indirect relationships between variables (Tarka, 2018). After specifying the model, estimates of the free parameters are derived from observed data and following this step, the value of the fitting function is produced through estimation procedure (Hoyle, 1995). The value of the fitting function 'summarizes the degree of correspondence between the implied and observed covariance matrices' (Hoyle, 1995: 6). Then, various fit indices are calculated in structural equation models to determine to what extent the proposed models fit with the data (Schermelleh-Engel, Moosbrugger and Müller, 2003). When the χ^2 goodness of fit test and adjunct fit indexes show acceptable fit of the model, 'individual estimates of free parameters are evaluated according to their difference from

some specified null value, typically zero' (Hoyle, 1995: 9). In this direction, model parameter estimates showing standardized and unstandardized coefficients are produced (Kwan and Chan, 2011). Hoyle (1995: 9) states that 'unstandardized estimates indicate the number of units change in the dependent variable per unit change in the independent variable when all remaining independent variables are at their mean' and 'standardized parameter estimates are transformations of unstandardized estimates that remove scaling information and, therefore, invite informal comparisons of parameters throughout a model.'

Hypotheses included in the proposed structural model in this study are as follows:

H1: There is a correlation between accountability and occupational awareness.

H2: Contribution to organization has a mediator role in the relationship between accountability and occupational awareness.

H3: Emotional labor has a mediator role in the relationship between accountability and occupational awareness.

H4: Personal development has a mediator role in the relationship between accountability and occupational awareness.

Sample

The sample of this research included 576 middle school teachers from Gaziantep province in the southeast of Turkey. Sampling was carried out on the basis of the consideration that it will not be possible to reach the entire population and therefore simple random sampling was used in the study. The survey was applied on a total of 710 teachers at 38 schools within the scope of the study population and a total of 576 filled surveys were included in the study for analysis. The sample consisted of 576 teachers corresponds to 10.84% of the total population of the study. Table 1 presents the demographic characteristics of middle school teachers included in the sample.

Variable	Options	f	%
Gender	Female	352	61.1
	Male	224	38.9
Marital Status	Married	454	78.8
	Single	122	21.2
Age	20–25	74	12.8
	26–30	119	20.7
	31–35	126	21.9
	36–40	135	23.4
	41–45	80	13.9
	46 and above	42	7.3
	Field of Study	Turkish	107
English		59	10.2
Mathematics		107	18.6
Science		62	10.8
Social Sciences		40	6.9
Physical Education		37	6.4
Visual Arts		18	3.1
Music		11	1.9
Information Technologies		21	3.6
Psychological Counseling and Guidance		22	3.8
Religious Culture and Moral Knowledge		57	9.9
Technology and Design		27	4.7
Arabic		5	.9
Special Education		3	.5
Union Membership		Member	356
	Not a member	220	38.2
Professional Seniority	0–5 years	171	29.7
	6–10 years	128	22.2
	11–15 years	115	20
	16 years and above	162	28.1
Number of Students in Schools	0–400	81	14.1
	401–900	225	39.1
	901 and above	270	46.9

Table 1: Demographic characteristics of the sample (source: own calculation)

Measurement

Personal information form, the Levels of Teachers' Accountability Scale and the Occupational Professionalism of Teachers Scale were used in the study as data collection tools.

Personal Information Form

The demographic data in Table 1 for the teachers included in the sample were acquired via personal information form.

The Levels of Teachers' Accountability Scale

The Levels of Teachers' Accountability Scale has been developed by Arslan Durmuş (2016). The first form of the scale developed by the researcher includes 39 items. A total of 5 items were excluded from the scale following the validity studies and the final version of the scale consists of a total of 34 items. Teachers are asked to rate their accountability, for each item, on a 5-point frequency-based Likert type scale, ranging from 1 (rarely) to 5 (always). The scale is comprised of four dimensions called duty and responsibility, obstacles, expectations and communication. The items of the obstacles dimension are coded in reverse since they include negative propositional statements.

First level Confirmatory Factor Analysis (CFA) was carried out to determine whether this scale is verified for the sample of this study or not. The fit indices of the scale were as follows: χ^2/df (2.40), the Root Mean Squared Error of Approximation [RMSEA] (.05), Root Mean Square Residual [RMR] (.04), the Goodness of Fit Index [GFI] (.91), the Adjusted Goodness of Fit Index [AGFI] (.90), the Comparative Fit Index [CFI] (.92), Tucker-Lewis Index [TLI] (.91), Incremental Fit Index [IFI] (.92).

Reliability analysis was carried out by using Cronbach's Alpha coefficient for estimating reliability for the scale and its dimensions. As a result of the analysis, Cronbach's Alpha values for the scale and its dimensions were as follows: The scale (.74), duty and responsibility (.83), obstacles (.74), expectations (.76), communication (.72).

The Occupational Professionalism of Teachers Scale

The Occupational Professionalism of Teachers Scale was developed by Yılmaz and Altınkurt (2014) to determine the opinions of teachers regarding their occupational professionalism. The 5-point Likert type scale is comprised of 24 items. The items in the scale are ranked from 1 (I certainly do not agree) to 5 (I certainly agree). Higher scores obtained from the scale indicate positive opinions of teachers regarding his/her occupational professionalism, whereas lower scores indicate negative opinions. The scale is comprised of 4 dimensions called personal development, contribution to organization, occupational awareness and emotional labor.

The first level CFA was conducted in order to determine whether the scale can be verified with the sample of the present study or not. The fit indices of the scale were as follows: χ^2/df (2.72), RMSEA (.06), RMR (.03), GFI (.93), AGFI (.90), CFI (.93), TLI (.92) and IFI (.93).

Reliability analysis was carried out by using Cronbach's Alpha coefficient for estimating reliability for the scale and

its dimensions. As a result of the analysis, Cronbach's Alpha values for the scale and its dimensions were as follows: The scale (.88), contribution to organization (.74), emotional labor (.78), personal development (.83), occupational awareness (.79).

Data Analysis

SPSS 23.0 and AMOS 23.0 software were used to analyze the acquired data. The skewness and kurtosis coefficients were examined for determining whether the data display normal distribution or not. Skewness and kurtosis coefficients between -1 and +1 indicate perfect fit with regard to a normal distribution, whereas values between -2 and +2 indicate acceptable with regard to a normal distribution (George and Mallery, 2010). It was determined that the skewness and kurtosis coefficients of the scales and the dimensions of both scales were between +1 and -1. Accordingly, it was concluded that the data set of the present study followed a normal distribution. Descriptive statistics including the mean (\bar{x}) and standard deviation (sd) values were first determined for the scores obtained from the scales. Pearson correlation analysis was applied for examining the relationships among occupational professionalism, accountability and the dimensions of occupational professionalism.

The conceptual model concerning the mediating roles of contribution to organization, emotional labor and personal development dimensions of teacher occupational professionalism (mediator variables) in the relationship between teacher accountability (independent variable) and occupational awareness dimension of occupational professionalism (dependent variable) was analyzed through SEM. Accordingly, path analysis was conducted to test the proposed conceptual model. The value intervals suggested by Browne and Cudeck (1993), Kline (2011), Bentler (1980), Marsh et al. (2006) and Schermelleh-Engel, Moosbrugger and Müller (2003) were taken as a reference when interpreting the fit indices of the model. Sobel Test analysis was applied for testing whether the mediating effect is statistically significant or not. Sobel Test is used to test the mediation relationships included in the proposed conceptual models.

Sobel test investigates whether the indirect effect is significant and detected indirect effect points out the path between dependent and independent variables through a mediator variable (Sobel, 1982). The existence of a potential mediating variable can be detected by comparing the difference between total effect and direct effect of the independent variable and consequently, the type of mediation can be whole or partial (Neiheisel, 2017). If the effect of the independent variable on the dependent variable decreases but it is still significant in the presence of a mediator variable, the mediator variable has a partial mediation role. However, if the independent variable no longer significantly affects the dependent variable in the presence of a mediator variable, the mediator variable has a full mediation role (Abu-Bader and Jones, 2021). In Sobel test, 'Z score will be statistically significant if it falls outside ± 1.96 given a two-tailed alpha of .05 and outside ± 2.58 given a two-tailed alpha of .01' (Abu-Bader and Jones, 2021: 47).

RESULTS

Descriptive Statistics and Correlations of Teacher Accountability and Occupational Professionalism

Table 2 presents the descriptive statistics including mean and standard deviation values regarding the accountability and occupational professionalism of middle school teachers along with the correlation coefficients calculated for the relationships among accountability, occupational professionalism and the dimensions of occupational professionalism.

	1	2	3	4	5	6
1. AC	1	.458	.384	.420	.269	.348
2. OP		1	.823	.758	.779	.699
3. CtO			1	.450	.552	.418
4. EL				1	.373	.575
5. PD					1	.362
6. OA						1
Mean	3.80	4.25	4.09	4.49	3.80	4.40
Sd	.29	.39	.50	.42	.72	.43

Note: $p < .01$

Abbreviations: AC: Accountability, OP: Occupational Professionalism, CtO: Contribution to Organization, EL: Emotional Labor, PD: Personal Development, OA: Occupational Awareness

Table 2: Descriptive statistics and correlations among teacher accountability, occupational professionalism and the dimensions of occupational professionalism (source: own calculation)

When the correlation coefficients related to the variables included in the research questions were examined based on the correlation coefficient ranges (Ratner, 2009), it was seen that there were moderate positive correlations among variables, except for the weak positive correlation between accountability and personal development.

A positive and statistically significant correlation was observed between the accountability of middle school teachers and their occupational professionalism ($r = .458$). A positive and statistically significant correlation was also observed between the accountability of middle school teachers and their contribution to the organization ($r = .384$), emotional labor ($r = .420$), occupational awareness ($r = .348$) and personal development ($r = .269$). Occupational awareness of teachers was significantly and positively correlated with occupational professionalism ($r = .699$), contribution to organization ($r = .418$), emotional labor ($r = .575$) and personal development ($r = .362$).

When the ranges of mean scores for the 5-point scale were evaluated, the scores between 3.40 and 4.19 were in the fourth range, and the scores between 4.20 and 5.00 were in the fifth range. Therefore, the scores in the fifth range indicated a more positive perception. As can be seen in Table 2, teachers' self-assessments on their occupational professionalism ($\bar{x} = 4.25$) were more positive than teachers' self-assessments on their accountability ($\bar{x} = 3.80$). Teachers also evaluated themselves quite positively concerning emotional labor ($\bar{x} = 4.49$) and occupational awareness ($\bar{x} = 4.40$). However, personal development ($\bar{x} = 3.80$) had the lowest average score along with accountability.

The Effect of Teacher Accountability on Teacher Occupational Awareness with the Mediating Roles of Contribution to Organization, Emotional Labor and Personal Development

After investigating the correlations among variables, the direct impact of accountability on occupational awareness was first examined prior to analyzing the proposed conceptual model regarding the effect of accountability on occupational awareness with the mediating roles of contribution to organization, emotional labor and personal development dimensions of occupational professionalism. Figure 2 presents the results regarding the effect of accountability on occupational awareness with the standardized path coefficients obtained by employing SEM technique.

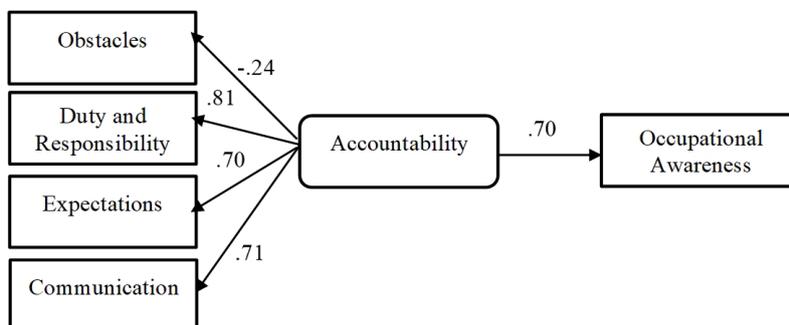


Figure 2: SEM results regarding the effect of accountability on occupational awareness (source: own calculation)

To analyze the mediating roles of other variables in the relationship between accountability and awareness, the direct effect of accountability on awareness should be examined. The values included in Figure 2 show the standardized path coefficients (β) and point out the effects of the variables. A positive relationship can be observed in Figure 2 between the accountability and occupational awareness of middle school teachers ($\beta = .70, p < .05$) and it was revealed that teachers' being accountable directly affected their occupational awareness. There is no hypothesis related to the dimensions of accountability in the model. However, they are also shown in Figure 2 to illustrate the structure of accountability clearly. The goodness of fit of the model was also determined through SEM analysis. Fit statistics show whether the conceptual model in Figure 2 explains the sample data or not. In case the model does not fit the data, the model is rejected. The fit indices of the conceptual model regarding the effect of accountability on occupational

awareness were calculated as follows: $\chi^2/df(2.179)$, RMSEA (.045), RMR (.038), GFI (.91), AGFI (.90), CFI (.92), TLI (.91) and IFI (.92). Since these indices showed good and acceptable fits, the conceptual model that indicates the direct effect of accountability was verified. Therefore, the first hypothesis (H1) of the study indicating a correlation between accountability and awareness was not rejected.

Contribution to organization, emotional labor and personal development dimensions of occupational professionalism were included as mediating variables in the relationship between accountability and occupational awareness dimension of occupational professionalism after determining the impact of accountability on occupational awareness. Figure 3 presents the results including the standardized path coefficients (β) of the conceptual model proposed in the study by employing SEM technique.

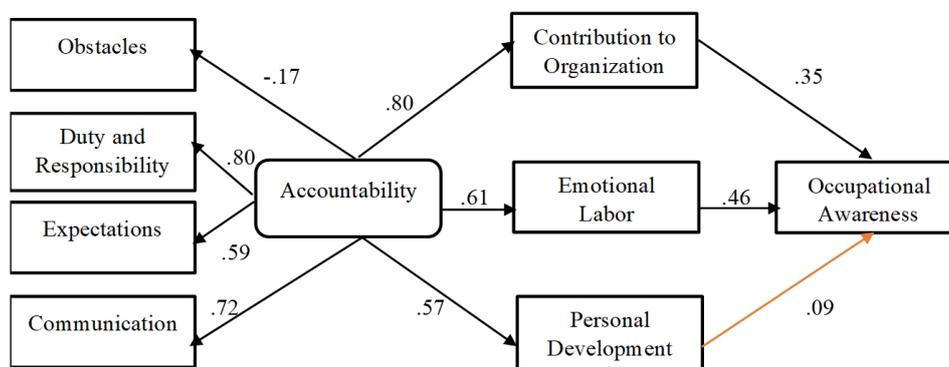


Figure 3: SEM results regarding the mediating roles of contribution to organization, emotional labor and personal development in the relationship between accountability and occupational awareness (source: own calculation)

The dimensions of accountability are also shown in Figure 3 to illustrate the structure of accountability clearly although they are not included in research hypotheses. In order to explain the values in detail concerning the proposed model illustrated in Figure 3, Table 3 presents the unstandardized estimation values (B) for the paths set forth in the model, standard error (SE), *t*-value, standardized beta (β) and significance (*p*) values.

Path	B	SE	<i>t</i> -Value	β	<i>p</i>
CtO ← AC	1.8	.12	9.63	.80	<0.001
EL ← AC	.54	.07	7.83	.61	<0.001
PD ← AC	.99	.11	9.17	.57	<0.001
OA ← CtO	.24	.05	5.34	.35	<0.001
OA ← EL	.54	.08	6.75	.46	<0.001
OA ← PD	.05	.03	1.71	.09	.09

Table 3: Path coefficients regarding the mediating roles of contribution to organization, emotional labor and personal development in the relationship between accountability and occupational awareness (source: own calculation)

A positive and statistically significant relationship was determined between accountability and contribution to organization ($\beta = .80, SE = .12, t = 9.63, p < .05$), emotional labor ($\beta = .61, SE = .07, t = 7.83, p < .05$) and personal development ($\beta = .57, SE = .11, t = 9.17, p < .05$).

A positive and statistically significant relationship was observed between occupational awareness and contribution to organization ($\beta = .35, SE = .05, t = 5.34, p < .05$) and emotional labor ($\beta = .46, SE = .08, t = 6.75, p < .05$). However, no statistically significant relationship could be observed between personal development and occupational awareness ($\beta = .09, SE = .03, t = 1.71; p > .05$).

The fit indices of the proposed conceptual model were also calculated within the scope of SEM analysis as follows: $\chi^2/df(1.954)$, RMSEA (.041), RMR (.037), GFI (.91), AGFI (.90), CFI (.91), TLI (.90) and IFI (.91). Fit indices concerning the conceptual model represented good and acceptable fits. Accordingly, the proposed conceptual model can explain the underlying structure of the research data.

It was determined following the SEM analysis of the conceptual model developed that contribution to organization and emotional labor play a mediator role in the relationship between accountability and occupational awareness. Sobel test analysis was implemented to test whether the mediating effect was statistically significant or not. Accordingly, MedGraph-I software developed by Jose (2003) was used to enter the data and the results are presented in Table 4.

Type of Mediation	Contribution to Organization Partial	Emotional Labor Partial
Sobel Z-Value	5.571822	8.580824
p-value	< 0.000001	< 0.000001
Direct Effect	0.391	0.293
Indirect Effect	0.097	0.195
Total Effect	0.488	0.488

Table 4: Sobel mediation test results regarding the mediating roles of contribution to organization and emotional labor in the relationship between accountability and occupational awareness (source: own calculation)

As a result of the Sobel test, it was shown that the contribution to the organization and emotional labor dimensions played partial mediating roles and that the mediating impacts were statistically significant at a level of $p < .001$. The results regarding contribution to organization variable were as follows: The direct impact of accountability on occupational awareness was $\beta = 0.391$, the indirect impact due to the mediating effect of contribution to organization was $\beta = 0.097$ and the total impact was $\beta = 0.488$. According to the mediation analysis of emotional labor in the conceptual model, the direct impact of accountability on occupational awareness was $\beta = 0.293$; the indirect impact due to the mediating effect of emotional labor was $\beta = 0.195$ and the total impact was $\beta = 0.488$. Consequently, the second (H2), third (H3) and fourth (H4) hypotheses of the study were not rejected and finally, the proposed conceptual model was fully confirmed.

DISCUSSION

The study discusses the role of teacher accountability in the improvement of occupational professionalism of teachers. However, relationships between teacher accountability and occupational professionalism were analyzed through a different theoretical model in the study. It was revealed that how teacher accountability strengthens teacher occupational awareness considered an important indicator of occupational professionalism by means of other components of occupational professionalism.

As the answer to the first question of the research, a positive and significant relationship was determined between accountability and the occupational professionalism of teachers. An increase in the accountability of teachers enables them to be more professional in their occupation. Hence, making teachers accountable may be used as an effective tool for improving their occupational professionalism. Torres and Weiner (2018) state as a result of their study on new professionalism that accountability enables teachers to develop the sense of competition and to question their practices. Questioning of teaching practices with the aim of increasing student success supports teacher occupational professionalism as an important component of their accountability. The fact that especially in our day teachers are expected to display a successful professional performance by increasing the academic success of students renders teachers more accountable. Therefore, the implementations put into practice in accordance with these expectations that support occupational professionalism further strengthen the accountability of teachers. Especially, the understanding of teacher performance evaluation based on exam results of students makes the accountability of teachers

more important (Kraft et al., 2018). Accountability based on student exams has become the focus of various education reforms to examine the effect of teacher performance on student success (McCaffrey et al., 2003). The increasing focus on student success in education systems makes the professional development of teachers an obligation. Thus, there is a need for effective personal accountability systems for teachers to ensure that professional development and hence occupational professionalism requirements are met in a systematic and planned manner. It is only in this manner that activities that may support occupational professionalism can be put into practice in a more systematic manner especially at the school level. The results of studies by Maxwell and Schwimmer (2016), Adams (2017) and Garver (2019) also support that accountability improves occupational professionalism. According to the results of these studies, accountability systems contribute to the attainment of quality teaching by ensuring teacher professionalism and professional development. The professional development of teachers is important with regard to the outputs of the education system. Countries that strive for high quality in their educational processes should accept the importance of professional development of teachers while developing their education policies and should make systematic investments in professional development (Visković and Višnjić Jevtić, 2018). The establishment of personal accountability systems as part of the investments which can be made for the professional development of teachers and hence their occupational professionalism plays an important role by itself as well as by enabling us to keep track of the quality of other educational investments. However, putting into practice the aforementioned personal accountability system with a school-based understanding and its internalization by teachers will lead to more effective results.

As the answer to the second question of the research, it was determined that contribution to organization and emotional labor played a partially mediating role in the relationship between the accountability of teachers and their occupational awareness and therefore, both of them mediated the effect of accountability on awareness. However, the personal development of teachers did not have a mediator role in this relationship and therefore, it did not mediate the effect of accountability. Improved understanding of accountability of teachers leads to increased use of emotional labor strategies to fulfill duties in the required manner and contributory behaviors related to the school processes. The ability of teachers to manage their emotions gains significant importance when the difficulties of educational environments are considered along with their individual and organizational connections (Wang,

Hall and Taxer, 2019). Emotional labor strategies enable analyzing emotions of individuals and ensure structuring a leader performance in this way (Zheng, Yin and Wang, 2018). Therefore, it can be considered that emotional labor plays an active role in increasing awareness and developing performance. Personal accountability also enables the individual to fulfill his/her duties in the most effective manner and emotional intelligence which is an important factor for emotional labor can be the descriptor of personal accountability (Mordhah, 2012). For these reasons, it can be stated that the relationship between emotional labor and accountability improves occupational awareness which enables the individual to carry out his/her profession in the most effective manner. In other words, the occupational awareness will be high for teachers who display emotional labor behaviors with the understanding of accountability.

It makes it easier to obtain outputs that contribute to schools when teachers strive to control their emotions while fulfilling their duties. Hence, the interaction between contribution to organization and emotional labor may improve teacher accountability and occupational awareness. Acting responsibly is the most effective precursor of work commitment (Mróz and Kaleta, 2016). Accordingly, it can be said that the work commitment will increase for a teacher who wants to take part in the development of the school and thus contributes to the school and consequently his/her occupational awareness will expand. Therefore, making more contributions to schools and putting forth more emotional labor with the understanding of accountability are the indications of occupational awareness of teachers. Indeed, the understanding of accountability supports and encourages the display of voluntary contributions to schools (Figlio and Kenny, 2009). Hence, an increase in the behaviors of teachers related to contributing to organization is an indicator of their occupational awareness as well as the result of accountability. The fact that contribution to organization and emotional labor make accountability easier in addition to strengthening occupational awareness helps us better understand their mediating roles in the relationship between accountability and occupational awareness.

Teacher accountability measures were based on self-assessments of teachers concerning their professional accountability in the study. However, the examination of teacher accountability based on formal implementations of teacher accountability in the education system could reveal different results in terms of teacher occupational professionalism. The study is the first to examine the theoretical model concerning teacher personal accountability and occupational professionalism in Turkey. There is also a limited number of empirical studies providing findings for the conceptual model proposed in the study. Therefore, it should be considered that the relationships between teacher accountability and occupational professionalism can be examined through different conceptual models including dimensions of occupational professionalism and accountability besides the conceptual model proposed in the study.

CONCLUSION

Occupational professionalism of teachers is becoming an increasingly important factor in the success of education

systems. For this reason, occupational awareness of teachers should be increased so that they can work with a professional understanding. However, supervisory practices for teachers may sometimes limit teacher professionalism. Therefore, structuring a supervision system based on teachers' individual accountability is a more effective choice in increasing teachers' occupational awareness and professionalism.

There has been a great global interest in efforts to ensure teacher accountability without harming teacher autonomy and professionalism. The results of this research also support this global interest in education. The results show that teachers' being accountable is related to their occupational professionalism. Since teacher accountability was considered based on personal accountability in the study, it can be inferred that the understanding of accountability supporting occupational professionalism is developed depending on professional self-assessment. Therefore, the establishment of supervision systems based on teachers' self-assessment is more beneficial in terms of teacher accountability and professionalism. The lack of a supervision system based on self-assessment can prevent the establishment of the links among teacher occupational professionalism, awareness and accountability.

According to the results of the study, accountability of teachers improves occupational awareness as an indicator of occupational professionalism. The accountability for teachers affects their occupational awareness with the partially mediating roles of their contribution to organization and emotional labor. However, their personal development does not mediate this effect. The results show how the accountability system should be designed, especially in countries like Turkey where a teacher accountability system based on self-assessment is needed. In an accountability system that can increase teachers' occupational awareness, there should be performance indicators related to contributing to the school and exhibiting emotional labor behaviors in the relations during school processes. An accountability system that includes these indicators will strengthen teacher professionalism.

Based on the results of the study, it can be recommended that obligatory standards can be put into effect regarding the number and characteristics of the professional development activities that teachers should take part in during a school year. It could be easier for teachers to make professional self-assessment with a systematic understanding in this way. Opportunities for improving occupational professionalism can be also provided by applying professional standards. Periodical analyses can be made regarding the needs and expectations of teachers related to the educational processes as well as school administration processes in order to support teachers to contribute to their schools and display emotional labor behaviors.

Different accountability systems result in different outcomes for teacher performance. Therefore, it is suggested that future studies should evaluate the effects of various accountability implementations designed for teachers on teachers' occupational professionalism and awareness to provide different perspectives. Results of the study have reflected teachers' personal opinions on their accountability and occupational professionalism. Future studies based on

observations could provide more comprehensive results in the evaluation of how teacher accountability affects teacher occupational professionalism and awareness as well.

Note

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