



## Teacher Leadership as a Predictor of School Effectiveness

### Okul Etkililiğinin Bir Yordayıcısı Olarak Öğretmen Liderliği

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#### Öz

Bu araştırmada öğretmen algılarına göre öğretmen liderliği ile okul etkililiği arasındaki ilişkiler incelenmiştir. Araştırmaya İstanbul'un Üsküdar ilçesindeki ilkokul, ortaokul ve liselerinde görev yapan toplam 546 öğretmen katılmıştır. Araştırma verilerinin toplanmasında "Öğretmen Liderliği Ölçeği" ve "Etkili Okul Ölçeği" kullanılmıştır. Verilerin analizinde aritmetik ortalama, Pearson Momentler Çarpımı Korelasyon Katsayısı ve Çoklu Doğrusal Regresyon analizi kullanılmıştır. Araştırmanın sonuçları okul etkililiği boyutlarından okul programı ve eğitim öğretim sürecinin en etkili boyut olduğunu, öğrenci boyutunun ise en az etkili boyut olduğunu göstermiştir. Öğretmen liderliği davranışlarının sergilenme düzeyi orta derecenin üzerinde bulunmuştur. Aynı zamanda öğretmen liderliğinin tüm boyutlarının okul etkililiğinin tüm boyutlarıyla pozitif yönde ve anlamlı ilişkileri olduğu bulunmuştur. Diğer yandan araştırma sonuçları öğretmen liderliği boyutlarından kurumsal gelişmenin okul etkililiğinin tüm boyutlarının anlamlı ve tek ortak yordayıcısı olduğunu ortaya koymuştur. Araştırma sonuçları ilgili alan yazınla ilişkili bir biçimde tartışılmış ve bazı öneriler sunulmuştur.

#### Abstract

In this study, the relationship between teacher leadership and school effectiveness was examined according to the teacher perceptions. 546 teachers in total working at primary, secondary and high schools in Üsküdar district of Istanbul participated in the study. The "Teacher Leadership Scale" and "Effective School Scale" were used to collect the data in the study. The arithmetic mean, Pearson Product-Moment Correlation Coefficient and Multiple Linear Regression analysis were used in the analysis of the data. The results of the study indicated that school program and educational process were the most effective dimension and the student dimension was the least effective dimension among the school effectiveness dimensions. The level of exhibiting teacher leadership behaviors was found to be above the medium level. It was also found out that all dimensions of teacher leadership had positive and significant relationships with all dimensions of school effectiveness. On the other hand, the results of the study indicated that institutional development was the significant and the only common predictor of all dimensions of school effectiveness among the teacher leadership dimensions. The results of the study were discussed with regard to the related literature, and some suggestions were presented.

#### Anahtar Kelimeler

öğretmen liderliği  
etkili okul  
okul etkililiği  
öğretmen liderliği  
davranışları

#### Keywords

teacher leadership  
effective school  
school effectiveness  
teacher leadership behaviors

## 1. Introduction

The effectiveness of schools is related to the fact that they achieve their goals and perform their functions, and present the environment and conditions that will ensure education and student learning. Moreover, the fact that they ensure the required performance in students and prepare students for life as a whole is an indicator of school effectiveness (Balı, 2011; Lunenburg and Ornstein, 1991; Şişman, 2011). In other words, effective schools provide positive outputs in education and learning. On the other hand, it is argued that schools' effectiveness levels will increase by identifying these characteristics and applying them to different schools. Thus, it is observed that studies conducted in this area concentrate on the dimensions and characteristics of effective schools. However, it is observed that it is not sufficiently focused on how these dimensions and features can be improved (Şişman, 2011). In this respect, it is possible to say that it is important to indicate the relationships with different organizational and personal variables to increase school effectiveness.

There is a series of studies in the literature, in which organizational or personal variables considered to be related to school effectiveness are investigated (eg. Ayık and Ada, 2009; Hoy, 1992; Hofman, Hofman and Gray, 2015; Hornig, Klasik and Loeb, 2010; Kazancıoğlu, 2008). In parallel with these studies, it is considered that one of the variables that may be related to school effectiveness is teacher leadership. Teacher leadership can be regarded as an important variable for schools to achieve their goals and perform their functions and have an effective structure because teacher leadership refers to classroom, school and out-of-school studies on increasing the quality of education and bringing student learning to higher levels, and to the need for teachers to take more responsibility in relation to student learning (Danielson, 2006; Harris and Muijs, 2005; York-Barr and Duke, 2004). In this regard, it is possible to say that the leadership behaviors of teachers are related to the effectiveness levels of schools. Then, it is important to indicate the level of these relationships because indicating which characteristics of teacher leadership are important in providing school effectiveness may contribute to school improvement studies (Şişman, 2011). On the other hand, it is observed that there is a limited number of studies in the literature, directly revealing the relationships between teacher leadership and school effectiveness (Ngang, Abdullah and Mey, 2010). Furthermore, it is stated that although there are many studies on teacher leadership, there are still many unanswered questions about how it contributes to school improvement (Harris and Muijs, 2005). As it can be understood from these statements, the investigation of both factors ensuring school effectiveness and the contribution of teacher leadership to school effectiveness may contribute to the expansion of the literature. Moreover, the findings obtained from the current study may provide some practical data to policy makers and implementers. As it can be understood from these statements, the relationships between teacher leadership behaviors and school effectiveness levels have been attempted to be examined in the current study.

Teacher leadership occurs in formal or informal ways at schools (Fullan, 1993) and focuses on the teachers' behaviors of taking responsibility to increase the quality in education and student learning (Danielson, 2006; Harris and Muijs, 2005; Wenner and Campbell, 2017; York-Barr and Duke, 2004). Teacher leadership brings to the forefront some important behaviors in providing the increase in the quality of education and educational services at schools. Teacher leaders play important roles in school changes with their knowledge, skills and attitudes (Harris and Muijs, 2005). It is observed that the behaviors of teacher leaders concentrate on some dimensions. The teacher leadership dimensions, discussed within the context of this study, are institutional development, professional development and cooperation with colleagues. These dimensions and their characteristics are as follows: (i) Behaviors for the institutional development; teachers actively participate in the decisions taken by the school management at a high level and provide support in implementing these decisions. They contribute to school leadership and play active roles in changing the structure of responsibility at schools. (ii) Behaviors for professional development emphasize the example behaviors of teachers for their colleagues and students. Moreover, they also emphasize the innovative efforts of teachers and the attempts at professional development to exhibit their teaching roles in a better way. They indicate the importance of affecting the teacher and students positively, and following and implementing professional innovations. (iii) Behaviors for cooperation with colleagues emphasize behaviors to increase educational effectiveness and learning together, improvement, practice and collective studies at school. Therefore, teachers try to meet professional and institutional needs (Beycioğlu, 2009).

The level of effectiveness to achieve the goals of the organization (Demirtaş and Güneş, 2002) is addressed as success obtained from outputs (Hesapçioğlu, 2006). On the other hand, school effectiveness is related to being able to achieve the goals and perform the functions of schools (Şişman, 2011). Schools effectiveness emphasizes centralizing teaching and student learning and forming the school environment in this framework (Demirtaş and Güneş, 2002). Specific qualifications, standards, and results are emphasized in determining the effective school and the effectiveness levels of schools (Şişman, 2011). Within the framework of school effectiveness, the concepts of a good school, effective school, and efficient school can be used (Hesapçioğlu, 2006). According to these statements, it is possible to say that the

effectiveness of schools is related to the fact that they can provide education and educational service that can meet the expectations of the school society and environment.

It is observed that there is not a complete agreement on the characteristics of effective schools in the literature (Lezotte, 1992; Lunenburg and Ornstein, 1991; Sammons, Hillman and Mortimore, 1995; Şişman, 2011). Within the context of this study, the dimensions suggested by Şişman (2011) are emphasized. These dimensions are school administrator, teacher, student, school program and educational process, school culture and environment, school environment and parents. The characteristics of these dimensions are as follows: (i) the school administrator sets an example to teachers with his/her behaviors in creating an effective school, plays a role as an education leader, (ii) Teachers emphasize cooperation among teachers in creating an effective school, contribute to the school program, (iii) Students adopt learning in cooperation with students at effective school, they are aware of what is expected from them, (iv) the educational process is well-structured at effective school in the school program and educational process, lesson time is used effectively for learning, the active participation of students is ensured, out-of-school studies are carried out, (v) According to the school culture and climate dimension, teaching and learning are supported in effective school, there is sincerity in the school society and team spirit among the shareholders, (vi) According to the school environment and parents dimension, parents play an active role in education at effective schools, they can easily reach school administrators, the environment and parents contribute to the school in different ways.

Teacher leadership has effects on the level of school, teacher and student. It affects the development of school culture positively at the school level and contributes to the quality of education and organizational development. Its effect at the teacher level is developing teaching practices in class and contributing to educational practices at school. Its effect at the student level is that the teacher positively affects the student learning and the increase in the education quality by focusing on the class. Teacher leaders contribute to sharing leadership by carrying out strategic studies throughout the school (Can, 2014). Teacher leadership occurs effectively in the class and ensures that teaching is performed more effectively, creates a cooperation environment and professionally contributes to the institution. It also increases the respect for the teacher and popularizes service, ensures the establishment of a common learning process at school and improves teaching by developing teaching practices. It provides the improvement of classes and school. It may improve the organizational health and professionalization perception positively at school (Murphy, 2005). Many different studies in the literature indicate that teacher leadership may increase school effectiveness indirectly upon different organizational and personal variables (Ağırman, 2016; Aslan, 2011; Ülger, 2015). In this respect, it is possible to say that mostly initiative and responsible teachers are important in providing school effectiveness and creating qualified education environments with their teacher leadership behaviors.

As it can be understood from the statements above, it is clear that there is a relationship between teacher leadership and school effectiveness. Thus, the aim of this study is to examine the relationships between teacher leadership behaviors and school effectiveness according to the teacher perceptions. In this respect, the following questions were attempted to be answered in the current study:

1. According to the teacher perceptions, what is the level of teacher leadership behaviors and school effectiveness?
2. According to the teacher perceptions, is there a significant relationship between teacher leadership behaviors and the levels of school effectiveness?
3. According to the teacher perceptions, are teacher leadership behaviors the significant predictors of the levels of school effectiveness?

## 2. Method

### Model

This study was designed in the relational model to examine the relationships between teacher leadership and school effectiveness. The dependent variables of the study are the administrator, teacher, student, school program and educational process, school culture and climate, school environment and parents dimensions among the sub-dimensions of school effectiveness. The independent variables of the study are the institutional development, professional development and cooperation with colleagues dimensions among the sub-dimensions of teacher leadership.

### Participants

The participants of the study consist of primary, secondary and high school teachers working in Üsküdar district of Istanbul during the 2016-2017 academic years. 546 teachers from the appropriate schools that were reached participated in the study. 337 of the participants were female (62%), 209 (38%) were male. 110 teachers (20%) from primary scho-

ols, 241 (44%) from secondary schools and 195 (36%) from high schools participated in the study. The average age of the participants in the study was 37.5 years. The average term of service of the teachers was 5.9 years and the average seniority was 13.5 years.

### Data Collection Tools

The data on the demographic characteristics of the participants were collected as gender, age, seniority, years worked at the current school and the school type they worked in. The Teacher Leadership Scale and Effective School Scale were used to collect the data in the study.

### Effective School Scale

The scale was developed by Şişman (2011) and indicates the effectiveness levels of schools according to the teacher perceptions. The scale consisting of 6 dimensions and 56 items was prepared as a 5-point Likert-type scale identified between “(1) Strongly Disagree” and “(5) Strongly Agree”. In the scale, the administrative dimension consists of 8 items, the teacher dimension consists of 10 items, the student dimension consists of 8 items, the school program and educational process consist of 10 items, the school culture and environment consist of 10 items and the school environment and parents dimension consists of 8 items. The Cronbach’s Alpha coefficient calculated for the reliability of the study was found to be .93 (Şişman, 2011). The scale was used in different studies and the reliability values took the values of .88 and above in the sub-dimensions and the whole scale (Kuşaksız, 2010; Yılmaz, 2006). According to the fit indexes calculated as a result of the CFA conducted to test the compatibility of the structure of the effective school scale consisting of 6 dimensions and 56 items with the data of this study, the model was found to be consistent after conducting 4 suggested modifications ( $\chi^2 = 4948.87$ ;  $p < .05$ ;  $df = 1465$ ;  $\chi^2/df = 3.37$ ;  $RMSEA = .066$ ;  $CFI = .87$ ;  $GFI = .73$ ). The standard factor loads of the items in the scale vary between .44 and .89. The Cronbach’s Alpha coefficient calculated for the reliability of the entire scale for the current study was found to be .97. The Cronbach’s Alpha coefficients calculated for the reliability of the sub-dimensions in the scale were found to be .94 for the administrator dimension, .92 for the teacher dimension, .93 for the student dimension, .93 for the school program and educational process, .94 for the school culture and environment and .90 for the school environment and parents.

### Teacher Leadership Scale

The scale was developed by Beycioğlu (2009) and indicates the levels of teacher leadership behaviors according to the teacher perceptions. A 5point Likert-type scale identified between “(1) Never” and “(5) Always” was used in the scale consisting of 3 dimensions and 25 items. The explained variance was found to be 57.23%. The institutional development dimension in the scale consists of 9 items, the professional development dimension consists of 11 items and the cooperation with colleagues dimension consists of 5 items. The Cronbach’s Alpha coefficient calculated for the entire scale in the study is .93 and the Cronbach’s Alpha coefficients calculated for the sub-dimensions vary between .87 and .92 (Beycioğlu, 2009). This scale was used in different studies and the Cronbach’s Alpha coefficients calculated at the entire scale level were found to be .90 and above (Kılınc, 2014). The CFA was conducted to test the compatibility of the structure of the teacher leadership scale consisting of 3 dimensions and 25 items with the data of this study. As a result of the CFA, 1 item from the professional cooperation dimension of the scale, 2 items from the institutional development dimension and 1 item from the professional development dimension were excluded and 4 modifications were made. In conclusion, it was decided that the scale consisted of three sub-dimensions and 21 items and the fit indexes were at the sufficient level ( $\chi^2 = 842.55$ ;  $p < .05$ ;  $sd = 181$ ;  $\chi^2/df = 4.65$ ;  $RMSEA = .082$ ;  $CFI = .92$ ;  $GFI = .87$ ). The standard factor loads of the items in the scale vary between .63 and .85. The Cronbach’s Alpha values calculated for the reliability of the scale were found to be .91 for the institutional development dimension, .92 for the professional development and .86 for the cooperation with colleagues dimension. The Cronbach’s Alpha value calculated for the reliability of the entire scale was found to be .92.

### The Analysis of the Data

The analysis of the data was basically conducted in two steps. In the first step, the data were examined in terms of missing or incorrect values, outliers, and multiple changes. The average value was attributed to missing values. In the second step, the sub-problems were analyzed. In the analysis of the sub-problems, the average value was calculated for each factor, and the analyses were conducted on these factor values. In addition to that, multicollinearity among the variables, the variance inflation factor (VIF) and tolerance values were examined. Firstly, the skewness and Q-Q graph, mod and median values were examined for the normality of the data. In this regard, firstly, the normality assumption was tested to check the compatibility of the data with the analysis to be conducted. It was observed that the skewness values of the variables were in the range between (+0.12) and (-1.19) and the kurtosis values were between (-.45) and

(+2.2) within the context of the study. It is possible to assume that the distribution was normal depending on the fact that skewness and kurtosis were between (+2) and (-2) (Gravetter and Wallnau, 2014; Trochim and Donnelly, 2006). Moreover, the histogram and Q-Q graphs were examined together for normality. It was observed that the average, mod and median values took values close to each other. When these results are considered together, it is possible to say that the normality-related premises are realized.

In the study, autocorrelation, multicollinearity, homoscedasticity characteristics among the assumptions of the regression analysis were examined. The minimum tolerance value was found to be .43, and the maximum VIF (Variance Inflation Factor) value was found to be 2.35. It was observed that the highest CI (Condition Index) value was 24.59. The fact that the tolerance value is lower than .20 and the VIF value is higher than 10, the CI value is higher than 30, and the correlations between the independent variables are .80 and above may be a sign of multicollinearity (Büyüköztürk, 2010). In addition to this, the Durbin-Watson (D.W) value was found to be in the range of 1.5 and 2.5. A correlation value ( $r = .70$ ) was found between the independent variables. With reference to these results, it was assumed that there was not multicollinearity.

The arithmetic means of the points obtained in the analysis of the data were calculated to solve the sub-problems in the study. The analyses were conducted upon these values. The Pearson Product-Moment Correlation coefficient ( $r$ ) was calculated to determine the relationship between the variables. The Multiple Linear Regression Analysis was conducted to identify the predictive power of teacher leadership on school effectiveness. The sub-dimensions of teacher leadership were considered as independent, and the school effectiveness dimensions were considered as dependent variables. In the interpretation of the regression analyses, standardized Beta ( $\beta$ ) coefficients and the t-test results for the significance of these were examined. The significance of the data was determined according to the .05 level.

The Confirmatory Factor Analysis (CFA) was carried out to identify whether the factor structures of the scales used in the study were consistent with the data of this study. The references of the fit indexes of the confirmatory factor analysis are as follows; the fact that the coefficient obtained from the GFI, AGFI is higher than .85 (Anderson and Gerbing, 1984; Cole, 1987) or .90 (Kline, 2005; Schumacker and Lomax, 1996) is accepted as a good fit. The values of .10 and lower obtained from the RMSEA are sufficient for fit. The fact that the rate of  $\chi^2/df$  is between 2-5 indicates good fit and values lower than 2 indicate perfect fit (Jöreskog and Sörbom, 2001).

### 3. Findings and Interpretations

#### The relationships between the mean and standard deviation values in relation to the variables, and the variables

The correlations between the mean and standard deviation values in relation to the variables of the study and the variables are presented in Table 1.

**Table 1. The correlations between the mean and standard deviation values in relation to the variables, and the variables**

Variables	$\bar{X}$	S	1	2	3	4	5	6	7	8	9
<b>Teacher Leadership</b>											
1. Cooperation with Colleagues	4.13	.73	1	.65**	.70**	.49**	.58**	.43**	.57**	.53**	.54**
2. Institutional Development	3.60	.89		1	.61**	.51**	.60**	.57**	.61**	.64**	.64**
3. Professional Development	4.31	.61			1	.46**	.51**	.43**	.58**	.50**	.52**
<b>School Effectiveness</b>											
4. School administrator	3.88	.88				1	.63**	.54**	.65**	.77**	.65**
5. Teacher	3.84	.77					1	.65**	.75**	.64**	.67**
6. Student	3.28	.82						1	.64**	.62**	.64**
7. School program and educational process	3.90	.74							1	.76**	.76**
8. School culture and climate	3.70	.85								1	.79**
9. School environment and parents	3.63	.82									1

\*\*  $p < .01$

Upon examining Table 1, it is observed that according to the teacher perceptions, the professional development dimension ( $\bar{X} = 4.31$ ), cooperation with colleagues dimension ( $\bar{X} = 4.13$ ), institutional development dimension ( $\bar{X} =$

3.60) among the teacher leadership dimensions have an average higher than the medium level. It is observed that teacher leadership focuses on the *professional development and professional cooperation dimension* at the highest level. Institutional development is the dimension that requires to be improved at most. When the averages related to school effectiveness are examined, it is observed that the school program and educational process ( $\bar{X} = 3.90$ ), school administrator ( $\bar{X} = 3.88$ ), teacher ( $\bar{X} = 3.84$ ), school culture and climate ( $\bar{X} = 3.70$ ), school environment and parents ( $\bar{X} = 3.63$ ) dimensions are above the medium level and the student ( $\bar{X} = 3.28$ ) dimension is at the medium level. According to the teacher perceptions, the most effective dimension is school program and educational process, and the least effective dimension is the student dimension. The student dimension is the dimension that requires to be improved.

It is observed in Table 1 that all dimensions of teacher leadership are positively significantly related to all dimensions of school effectiveness. It is observed that the strongest relationships are between institutional development and school culture and climate ( $r = .64, p < .01$ ), school environment and parents ( $r = .64, p < .01$ ). On the other hand, it is also observed that there are strong relationships between cooperation with colleagues and teacher effectiveness ( $r = .58, p < .01$ ), professional development and school program and educational process ( $r = .58, p < .01$ ) when compared to the others.

**Table 2. Multiple regression results**

Variables		B	SHB	$\beta$	t	p	Paired	partial	R	F	R <sup>2</sup>
Administrator	Constant	.96	.22		4.20	.00	-	-			
	PC	.24	.06	.20	3.68	.00	.49	.16			
	ID	.29	.04	.29	5.91	.00	.51	.25	.55	81.77	.31
	PD	.20	.07	.14	2.64	.00	.46	.11			
Teacher	Constant	.99	.18		5.524	.00					
	PC	.28	.05	.28	5.522	.00	.58	.23			
	ID	.31	.03	.37	8.189	.00	.60	.33	.65	136.41	.43
	PD	.11	.06	.09	1.957	.051	.51	.08			
Student	Constant	.88	.20		4.277	.00					
	PC	.05	.06	.05	.974	.33	.43	.04			
	ID	.44	.04	.48	9.940	.00	.57	.39	.58	93.50	.34
	PD	.13	.06	.09	1.923	.06	.43	.08			
Curriculum and educational process	Constant	.86	.16		5.186	.00					
	PC	.16	.04	.16	3.380	.00	.57	.14	.67	152.49	.45
	ID	.28	.03	.35	7.980	.00	.61	.32			
	PD	.30	.05	.25	5.476	.00	.58	.22			
School culture and climate	Constant	.67	.19		3.424	.00					
	PC	.17	.05	.15	3.054	.00	.54	.13	.66	141.91	.44
	ID	.45	.04	.47	10.60	.00	.64	.41			
	PD	.15	.06	.11	2.359	.01	.51	.10			
School environment and parents	Constant	.66	.18		3.526	.00					
	PC	.15	.05	.14	2.800	.00	.54	.12	.67	147.22	.45
	ID	.43	.04	.47	10.664	.00	.64	.41			
	PD	.18	.06	.13	2.909	.00	.52	.12			

PC: Professional Cooperation, ID: Institutional Development, PD: Professional development

Upon examining Table 2, it is observed that the professional cooperation, institutional development and professional development variables have a significant relationship with the effectiveness of school administrator ( $R = .55, p < .01$ ). These three predictive variables together account for 31% of the effectiveness of school administrator. Upon examining Table 2, it is observed that the professional cooperation, institutional development and professional development variables together have a significant relationship with the school teacher effectiveness dimension ( $R = .65, p < .01$ ). These three predictive variables together account for 43% of the effectiveness of school administrator. Upon examining Table 2, it is observed that the professional cooperation, institutional development and professional development variables together have a significant relationship with the student effectiveness dimension ( $R = .58, p < .01$ ). These three predictive variables together account for 34% of the effectiveness of school administrator.

Upon examining Table 2, it is observed that the professional cooperation, institutional development and professional development variables together have a significant relationship with the curriculum and educational process effectiveness dimension ( $R = .67, p < .01$ ). These three predictive variables together account for 45% of the school administrator effectiveness. Upon examining Table 2, it is observed that the professional cooperation, institutional development and professional

development variables together have a significant relationship with the school culture and climate dimension ( $R = .66, p < .01$ ). These three predictive variables together account for 44% of the school administrator effectiveness. Upon examining Table 2, it is observed that the professional cooperation, institutional development and professional development variables together have a significant relationship with the school environment and parents dimension ( $R = .67, p < .01$ ). These three predictive variables together account for 45% of the school administrator effectiveness.

#### 4. Discussion

In this study, the relationships between teacher leadership and effective school characteristics were examined according to the teacher perceptions. The results of the study indicate that there are significant positive relationships between teacher leadership and school effectiveness. Furthermore, the results of the study confirm that teacher leadership is an important variable that predicts school effectiveness.

According to the teacher perceptions, the most effective dimensions in the study is the school program and educational process dimension. The fact that the school program and educational process dimension is at a high level can be also considered to be a positive finding. This finding indicates that school curricula and school course hours are well structured. It is also possible to say that time loss during the lessons is reduced and the studies that will provide student participation for the realization of student learning are conducted. It is observed that the least effective dimension in the study is the student dimension. The fact that the effectiveness in the student dimension is perceived at a low level may be an indicator of the fact that students refrain from taking responsibility and do not exactly know what is expected from them. In addition to that, it is possible to say that the expectations of students in relation to their success and the studies based on cooperation are not at the sufficient level. In the literature, there are findings that are similar to the findings of this study (Kuşaksız, 2010; Şişman, 2011; Yılmaz, 2006). The fact that effectiveness especially in the student dimension in the study has been found to be low in a way to support the previous studies indicates that effectiveness in the student dimension constitutes an important problem. This condition may have different reasons. In this regard, the expectations of teachers from students may be at a low level because students make more effort depending on the success expected from them. When the expectations of teachers are high, they focus on the factors that they can change in students (Hopkins, 2001). Moreover, the fact that examination systems are based on competition decreases cooperation between students and makes it hard for them to explore themselves. On the other hand, it is observed that the effectiveness of the school environment and parents is at a low level in the study. As it can be understood from these statements, the dimensions of school effectiveness are at the medium level and above, and it is required to conduct studies to improve the student and parent, school, environment cooperation dimensions that are not effective at the sufficient level.

It is observed in the study that according to the teacher perceptions, teacher leadership behaviors focus on the *professional development dimension* followed by the *professional cooperation and institutional development dimension*. Furthermore, the level of exhibiting behaviors in these dimensions is perceived above the medium level. There are findings similar to these findings (Beycioğlu, 2009; Kılınç and Reçepoğlu, 2013). The fact that the teacher perceptions focus on the professional development dimension can be stated as that teachers follow innovations in their own fields, they are the role models for other teachers and try to do what is necessary for the teaching profession. On the other hand, it is observed in the study that professional cooperation among teachers is at the sufficient levels. In other words, it can be said that teachers share about learning and sufficiently support collective studies. However, it is observed that the institutional development dimension is at a lower level when compared to the other dimensions. According to this finding, it is possible to say that teachers are not so willing to take responsibility in the studies at their schools, share school leadership and implement joint decisions at school. This condition may have different reasons. Özdoğru and Aydın (2012) state that teachers do not sufficiently have a say in decisions at schools, and Demirtaş, Üstüner, Niyazi and Cömert (2008) indicate that teacher's boards considered as an expression area at schools do not operate efficiently (Demirtaş, Üstüner, Niyazi and Cömert, 2008). It is important for teachers to be considered as experts in their professions to improve teacher leadership (Danielson, 2006; Katzenmeyer and Moller, 2001). Furthermore, the fact that school administrators support teachers sufficiently makes teacher leadership behaviors stronger (Hart, 1994; Wenner and Campbell, 2017; York-Barr and Duke, 2004). According to these statements, it is possible to say that teachers must be supported, provided with opportunities to express themselves and considered as experts in their professions to increase institutional development among the teacher leadership dimensions to a more sufficient level.

In the study, it is observed that there are positive and significant relationships between the teacher leadership dimensions and effective school dimensions and the levels of the power of these relationships are close to each other. According to this finding, it is possible to state that as the level of displaying teacher leadership behaviors increases, the level of school effectiveness will also increase. There are findings similar to the findings of this study (Ngang, Abdullah and Mey, 2010).

Teacher leadership emphasizes behaviors aimed at ensuring professional development, professional cooperation and institutional development. On the other hand, school effectiveness is a multidimensional structure and this structure is discussed within the context of the effectiveness of administrator, teacher, student, program and educational process, culture and climate, school, environment and parent cooperation (Şişman, 2011). In this regard, teacher leaders may ensure that schools reach their goals and functions more easily by increasing cooperation among colleagues and by contributing to studies at schools in different areas. Teacher leaders take responsibilities related to the leadership at schools (Can, 2014) and ensure that schools are transformed into effective structures instead of considering studies at schools as boring (Danielson, 2006; Donaldson, 2006; York-Barr and Duke, 2004). The success of students increases with teacher leadership (Schmoker, 2006). Teacher leaders are committed to their work (Ülger, 2015), create a positive class environment (Aslan, 2011) and contribute to the school leadership capacity (Özçetin, 2013). In other words, teacher leaders play active roles in every field of the school, take responsibility and work student-centered. Such sense of work may make the works of administrators easier, ensure that teachers focus on student learning and increase the expectations in students. In addition to these, teachers acting with reference to this approach may make efforts for the improvement of school, parent and environment cooperation and contribute to making the school culture a success and effectiveness culture. In that case, according to these statements, it is possible to conclude that schools will provide better educational service, create successful learning products, develop school structures to create conditions in which all students will be able to learn along with teacher leadership behaviors.

It is observed in the study that behaviors providing institutional development among the teacher leadership dimensions are the only common and significant predictor of all dimensions of school effectiveness. In other words, when teachers take responsibility for increasing the quality of education at schools, provide support in taking decisions related to school and implementing these decisions, they can make schools reach more effective levels. Moreover, when they contribute to school leadership studies, they can contribute to the increase in the levels of school effectiveness. This finding is similar to the findings of Hoque, Alam and Abdullah (2011). In ensuring school effectiveness, it is important to ensure the cooperation of administrator, teacher, student, school, environment and parents, to plan the school program and educational processes well and to create a strong school culture at school (Şişman, 2010). In this regard, teacher leaders contribute to strengthening these dimensions to ensure school effectiveness. Teacher leaders contribute to the organizational health both as a role model and with education promotional activities with the studies they conduct (Murphy, 2005). Furthermore, they strategically approach the areas to be improved at schools and contribute to making the school culture a strong culture, teaching and educational practices (Can, 2014). They also develop collective activities at school with practices performed within the class and school (Angelle, Nixon, Norton, Niles, 2011). They also play active roles in institutional and non-institutional activities related to education and teaching (Güven, 2015). According to these statements, it is possible to say that when teachers take extensive responsibility in relation to school and student learning, they will provide the development of many dimensions and characteristics forming effective schools.

It is observed in the study that professional cooperation is an important variable predicting school effectiveness. Professional cooperation is an important predictor of all dimensions except for the student dimension among the school effectiveness characteristics. Professional cooperation indicates activities and collective studies to increase the educational quality at schools (Beycioğlu, 2009). In other words, it is possible to say that sharing among teachers in educational areas and behaviors prioritizing collective learning and teaching will contribute to schools in achieving their goals and performing their functions. Professional cooperation among teachers at schools occurs with learning communities (Chamberland, 2009; Gaffney and Faragher, 2010; Hunzicker, 2012), creating the common vision (Chamberland, 2009; Muijs and Harris, 2006) and colleagues encouraging each other (Danielson, 2006; Harris and Muijs, 2005). Teacher leaders make other teachers stronger with the support they provide, ensure professional development with the studies conducted among colleagues and contribute to positive changes at school (Wenner and Campbell, 2017). Teachers acting in professional cooperation review the success of students (Johnson, 2012) and focus on student learning (Lewis, Perry, Friedkin, Roth, 2012). In conclusion, a positive change begins in the organization depending on the fact that colleagues improve each other at schools (Johnson, 2012). According to these statements, it is expected from schools to provide better educational service, reveal successful learning products and increase effectiveness characteristics with professional cooperation at schools.

The findings and suggestions in the study are as follows: (i) it is observed in the study that according to the teacher perceptions, the least effective dimensions are the *student dimension* and the *school environment and parents dimension*. These two dimensions require to be improved at most to ensure school effectiveness. To improve the student dimension, awareness studies can be carried out with students at the points of responsibility, achievement and self-knowledge. To improve the school environment and parents dimension, the reasons preventing the cooperation with school shareholders and the environment must be determined and removed by reviewing the studies at schools. In this respect, different organizations such as meetings, picnics and festivals must be carried out to integrate the environment and parents with the school. (ii) It is observed in the study that the institutional development dimension among the teacher leadership dimensions is perceived



at a lower level when compared to the other dimensions. Thus, the participation of teachers in decision-making processes at schools must be ensured at a higher level. Moral and motivation studies must be conducted to make teachers support the studies in and out of the school and adopt their schools. (iii) It is observed in the study that all dimensions of teacher leadership are positively related to all dimensions of school effectiveness. In this regard, school-based studies can be planned to increase the exhibition of behaviors to provide contribution to professional cooperation among teachers, professional development and institutional development. In that way, the effectiveness of schools can be increased. (iv) It is observed in the study that institutional development among the teacher leadership dimensions is an important predictor of all dimensions of school effectiveness. In this respect, the behaviors of teachers for institutional development can be considered important in terms of school effectiveness. In this regard, it can be considered important for school administrators to exhibit constructive and encouraging behaviors to make teachers ensure institutional development. Furthermore, responsibilities can be assigned in the distribution of leadership at schools and in the areas related to the professional fields of teachers. (v) It is observed in the study that professional cooperation is an important variable in ensuring school effectiveness. In this respect, a support and confidence culture must be created at schools to provide professional cooperation. Moreover, it is possible to say that it will be useful to structure teachers within the framework of learning communities to improve professional cooperation at schools. (vi) The results of the study can be discussed with more detailed and explanatory qualitative studies and the relationships between teacher leadership and school effectiveness can be investigated within the context of cause and effect. Since direct studies on the relationships between teacher leadership and school effectiveness are considered to be insufficient in the literature, new studies can be conducted on this issue. Since the scales related to school effectiveness are too long, short and comprehensive scales can be developed.

## 5. References

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