# Teachers' Perceptions About School Characteristics Supporting Professional Development: A Scale Development Study<sup>1</sup>

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#### Abstract

The aim of the study is to develop a scale that measures teachers' perceptions about school characteristics that support professional development (PD). The 40-item pool was created for the scale to be developed by examining similar measurement tools and literature. According to expert opinions, a 32-item trial form was created to conduct. The data were collected from 322 branch teachers. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) was carried out using the collected data. A three-factor structure with 19 items, explaining 61.43% of the variance, was obtained in the EFA. The fit index values ( $\chi^2/Df = 1.47$ , CFI = .96, TLI = .95, RMSEA = .056, RMR = .038, SRMR = .063) calculated in CFA to support the findings of the structure showed good fit. Cronbach Alpha coefficients were calculated as .91 for administrative support, .89 for collaborative structure, .74 for structural support, and .92 for the total scale. The results indicate that the scale is a valid and reliable measurement tool that can measure teachers' perceptions of supportive school characteristics that are effective in their participation in professional development.

Keywords: Professional development, Supportive school characteristics, Professional learning community, Scale development.

#### Introduction

Student achievement or improving student learning is an important indicator of quality in education (Akgündüz et al., 2015). In this context, educational reforms, new practices, and studies made by different stakeholders of education have become prominent in recent years to increase student achievement. But, as is known, there are many factors affecting student achievement. Although many factors such as student characteristics, teaching methods, classroom management, etc. are mentioned, teacher quality is accepted as the most important factor affecting student achievement (Adesina, et al., 2016: Carena, 2011; İlğan, 2013; Nye, Konstantopoulos, & Hedges 2004; OECD, 2005, 2011; Sanders & Horn 1998; Sass et al., 2012). Therefore, the quality of education cannot be above the quality of the teacher.

1. This study is part of a PhD thesis called "Investigation of the relationship between teachers 'participation in professional development and the attitudes toward professional development, readiness for self-directed learning and supportive school characteristics". Ethical Compliance Report was obtained from Scientific Research and Publication Ethics Committee of Inonu University, Decision Number: 2017/3/2, and research permit obtained Elazig Provincial Directorate of National Education for the study, Research Permit Number: 79137285-604.01.01-E.4143261.

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This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License The quality of the teacher is directly related to the quality of the teacher at the entry to the profession and the competence in the service education. Still, it is related to their professional development (PD), which enables them to develop their professional knowledge and skills according to the requirements of the age. (Hamdan & Lai, 2015; Kaçan, 2004; Özer, 2005). In this context, the PD of teachers forms the basis of educational reforms that affect the quality of education in the World (Sandholtz & Ringstaff, 2013; Seferoğlu, 2001; Smith & Desimone, 2003). Since effective professional development is a collaborative process that takes place mostly at school (Garet et al., 2001; Kwakman, 2003), the support of the school is important and needs to be measured. This research, it is aimed to develop a measurement tool that will measure teachers' perceptions of school support for their professional development.

## Background

The PD of teachers is generally used to express developing teachers' professional knowledge and skills (Craft, 2002). According to Guskey (2000), PD is the processes and activities that aim to improve the professional knowledge, skills, and attitudes of teachers and enable students to learn better. PD is used to highlight a lifelong process that includes education opportunities starting from pre-service education of teachers and continuing throughout their professional lives and ending in retirement (Bubb & Early, 2007; Telese, 2012). Therefore, PD is a concept that includes all forms of learning, from in-service training that teachers attend to special readings about their profession (Craft, 2002). PD is a process that requires teachers to learn both individually and collaboratively (Kwakman, 2003). Since professional development requires professional collaboration, some features of the organisation that teachers are in might be important for the PD of teachers. Because teachers are more willing to participate in PD within an organisational structure, where opportunities for their professional development are created, their PD is supported and rewarded (Liu et al., 2014). Also, it creates a friendly, collaborative, encouraging, loving or trustworthy learning environment for teachers in a supportive school (Shadur et al., 1999). Study shows that supportive organisational conditions

have a positive effect on employees' behaviour, organisational commitment, job satisfaction and participation (Rhoades et al., 2001). Supportive organisation conditions can include many factors such as attitudes and behaviours of school administrators, relationships between teachers and administrators, reward and punishment within the organisation. However, when considering supporting PD, the supportive school should be supported with some structural features to support the PD of teachers. When supportive school characteristics are evaluated in this context, the concept of professional learning communities (PLC), which is focused on increasing the achievement of students, emerges (Hord, 1997; Stoll et al., 2006).

PLC is based on the learning organisation (Stoll et al., 2006). The core features of PLC include creating a common vision, creating shared and supportive leadership, supporting communication, collaboration and implementation and supporting structural features to increase student achievement (Hipp et al., 2003; Stoll et al., 2006). Numerous studies show that PLC has a positive impact on student achievement (Bolam et al., 2005; Musanti & Pence, 2010). Results of the study reveal that in schools that have the characteristic of the PLC, students 'academic achievement is high and teachers' motivations, organisational commitment, and job satisfaction are high (Ilgan et al., 2011). In this context, it is desirable for all schools to show effective PLC characteristics. It is also an effective PD to support teachers' professional development (Dooner et al., 2008).

School is the place where professional development takes place significantly (Kwakman, 2003). Professional learning communities are also an important mechanism for PD to take place at school. It is known that schools being effective PLC positively affects teachers' PD and students' achievement. In this context, it is important to find out whether schools are PLC. Valid and reliable measurement tools are needed to measure whether schools are PLC or not. To measure the status of PLC in schools in Turkey, it has adapted many scales. However, these scales are mainly based on the functioning of western educational institutions. However, the functioning and organisational culture of educational institutions in Turkey show different characteristics than the

West. Some remarkable results have been obtained in the studies using adapted scales. For example, a study by Dervişoğulları (2014) showed that the teachers do not know the dimensions of the PLC and these dimensions are not functional in practice.

Similarly, in the study of Öğdem (2015), it was stated that some dimensions of the PLC scale and other PLC scales used in the study do not work when considered in the context of Turkish schools. These scales are considered to be problematic for measuring the characteristic of PLC in schools in Turkey. For this reason, it is thought that it would be beneficial to develop a measurement tool to determine teachers' perceptions about school characteristics that support their PD.

#### **Purpose of the Study**

The aim of the study is to develop a measurement tool that measures teachers' perceptions about school characteristics that support their professional development.

PD of teachers in Turkey is generally provided with individual efforts. School-level PD and collaborative PD practices are limited (Bümen et al., 2012). Professional development activities at school are very important in improving the quality of education. They include properties of effective PD activities such as focusing on content, active learning, collective participation, contact hours (Garet et al., 2001) that lead to a meaningful difference in students' achievement. The developed measurement tool will reveal the deficiencies in school-level PD by determining to what extent schools support teachers' professional development. The results to be obtained by using the developed measurement tool will enable educational practices and policies that will increase school-level PD.

# Method

The study, which aims to develop a scale that can be used to determine the perceptions of teachers about school characteristics that support their participation in PD, is a scale development study. **Item Pool** 

To create an item pool fort, the literature on the characteristics of the school that supports PD was examined. The item pool was created for the scale to be developed by examining similar measurement tools and literature. Some PLC scales that developed or adapted (İlgan et al., 2011; Kalkan, 2015; Olivier et al., 2003, 2010; Öğdem, 2015) were examined to create the item pool. Based on these scales and literature, a 40-items pool was created. Opinions of 2 faculty members in Education Management, 1 from the Curriculum and Instruction, were asked to ensure the content validity. By the opinions of the experts, 8 items were extracted and the scale form of 32 items was obtained. Opinions were received from one Turkish teacher and five other branch teachers to review the created scale form in terms of intelligibility and linguistic suitability. After making corrections according to the feedback obtained here, the trial scale form was made ready for implementation. Sample

The data were collected from 322 branch teachers working in Elazig city centre in 2017. Demographic features of the teachers are shown in Table 1.

Table 1: Demographic Characteristics of the
Participants

	Variables	N	%		
Gender	Male	170	52		
Gender	Female	152	48		
School level	Secondary school	172	53		
School level	High school	150	47		
	1-5 years	54	16		
	6-10 years	60	19		
Seniority	11-15 years	64	20		
	16-20 years	64	20		
	Over 20 years	84	26		
	Turkish	48	15		
	Maths	56	17		
	Science	60	18		
	Social science	56	17		
	English	36	11		
Branch	Vocational courses	14	4		
Dianch	Art / Sports	14	4		
	Religious Culture and Moral Knowledge	26	8		
	Information technologies	14	4		
	Guidance	4	1		
	Total	322	100		

52% of the teachers are male and 47% are female. 53% of teachers work in secondary schools and 47% work in high schools. 16% of teachers have 1-5 years, 19% 6-10 years, 20% 11-15 years, 20% 16-20 years, 26% 20 years of seniority. The branch of teachers are 15% in Turkish, 17% in mathematics, 18% in science, 17% in social sciences, 11% in English, 4% in sports and arts, 8% in religious culture and moral knowledge, 4% information technologies and 1% guidance.

# **Data Collection and Ethical Issues**

To collect the data, first of all, a questionnaire containing personal information form and trial form (see Appendix 3) was applied to the Scientific Research and Publication Ethics Committee of Inonu University and an "ethical compliance report" (Decision Number: 2017/3/2, see Appendix 1) was obtained for the study. To collect data from the teachers in the study sample, the documents, including the ethical compliance report, were applied to the Elazig Provincial Directorate of National Education for research permission. Elazig Provincial Directorate of National Education has approved the "research permit" (Number: 79137285-604.01.01-E.4143261, see Appendix 2) required to be carried out in the specified schools. The personal information form containing the demographic features of the participants and the trial scale form were conducted to the teachers by the researchers. The scale forms collected were analysed.

# Data Analysis

Construct validity of the measurement tool must be tested to reveal the validity of the measurement tool. Factor analysis is often used to test the construct validity of measurement tools (Büyüköztürk et al., 2014, 119). Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) was carried out. The data were prepared for analysis before EFA and CFA are carried out. Because, to carry out factor analysis, there are prerequisites such as the data being at least range scale, normal distribution, sufficient correlations, and homogeneous sample (Can, 2014, 298). The distribution of data was visually examined through histogram and P-P graphics to determine whether these prerequisites are met. Z scores, skewness and kurtosis coefficients were calculated.

For the skewness and kurtosis coefficients, the interval " $\mp$ 1" (Cokluk et al., 2010), for the z scores, "73.29" (Field, 2009, 139) was taken into consideration. In this context, 16 of 322 scale forms were extracted. Therefore, 306 scale forms providing prerequisites were analysed. Also, it is known that sample size is important for factor analysis. It is stated in the study (Ho, 2006, 207) that the sample size should not be less than 100. In this context, it can be said that the sample size meets the minimum requirements for factor analysis. The 306 data, which satisfy the prerequisites for factor analysis, were divided into two groups. EFA was carried out with the data of the first group and CFA was carried out with the data of the other group. Cronbach Alpha coefficient was calculated to reveal the reliability of the scale.

# Findings

In this section, the findings obtained from the validity and reliability studies of the scale were given.

# **Findings of Exploratory Factor Analysis**

EFA, one of the multivariate analyses to test construct validity of measurement tools, is used to reveal structures of which structure is not known exactly because it consists of different components (Can, 2014, 294). Before carrying out EFA, the Kaiser-Meyer-Olkin (KMO) test was performed. KMO coefficient was calculated as .931. Bartlett's sphericity test (5810.015; p = .000) was found significant. Since the KMO coefficient is another criterion related to the sample size (Can, 2014, 297), it is important in factor analysis. This finding shows that the sample size is good enough (Büyüköztürk, 2010). The principal components analysis method was used in EFA. In EFA, the following criteria (Büyüköztürk, 2010; Çokluk et al., 2010) are taken into account in the extraction of items and in determining the factors:

- Items in each factor must be coherent in terms of meaning and content,
- Factor eigenvalues must be 1 or above 1,
- The item in a factor must have a factor load of ".40" or more,
- The gap between the factor loading values in the items and the factor loading values in the other factors must be at least ".10" and higher.

First, the scree plot, which is one of the important indicators in deciding the factors of the scale, was examined. The scree plot for the scale is seen in Figure 1.

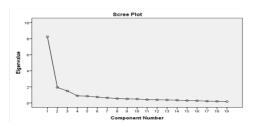


Figure 1: Scree Plot of the Scale

The slope deposit curve and the criteria mentioned above were taken into account to determine the number of factors; It was thought that the 3-factor structure would be appropriate for the scale. After the first three-factor analysis, some items in the scale (7, 8, 9, 10,11, 12, 13, 23, 25, 26, 31, 32, 33) were eliminated because they did not meet the above-mentioned criteria. Eigenvalues and variances related to the factors calculated in repeated factor

analysis are shown in Table 2.

Table 2:	Explained	Variances	and	Eigenvalues
	Relate	ed to the So	cale	

Factor	Eigen values	Percentage of variance	Total percentage of variance
1	8.250	43.42	43.42
2	1.930	10.16	53.58
3	1.492	7.85	61.43

As shown in Table 2, the first factor explains 43.42% of the total variance, the second factor explains 10.16% of the total variance, and the third factor explains 7.85%. The variance rate explained by three factors is 61.432%. Büyüköztürk (2010) states that the total variance explained by the scale is sufficient to be 30% and above in single factor scales, and the variance explained in multi-factor scales should be more. Therefore, it can be said that the total variance (61.43%) explained by three factors in the measurement tool in the study is sufficient. The EFA results for the items in the 3-factor scale are shown in Table 3.

Item	Factor 1	Factor 2	Factor 3	Common Factor Variance	Item-total Correlation
4	,923			,755	,852
3	,867			,686	,829
2	,842			,682	,810
1	,828			,559	,734
5	,828			,758	,874
6	,726			,632	,807
24	,560			544	,735
20		,916		,701	,808
19		,851		,724	,827
15		,837		,685	,814
16		,766		,469	,613
17		,733		,716	,837
18		,657		,550	,742
22		,595		,475	,688
14		,510		,358	,627
29			,945	,690	,689
28			,664	,564	,787
30			,641	,624	,796
27			,510	,498	,731

 Table 3: EFA Results of the Scale

As shown in Table 3, the factor loadings of the 7 items (1, 2, 3, 4, 5, 6, 24) in the first factor were between ".560" and ".923" and item-total correlation coefficients were between ".734" and ".874". The factor loadings of the 8 items (14, 15, 16, 17, 18, 19, 20, 22) in the second factor were between ".510" and ".916" and item-total correlation coefficients were between ".627" and ".837". The factor loadings of the 4 items (27, 28, 29, 30) in the third factor were between ".510" and ".945" and item-total correlation coefficients were between ".510" and ".945" and item-total correlation coefficients were between ".510" and ".945" and item-total correlation coefficients were between ".510" and ".945" and item-total correlation coefficients were between ".689" and ".796".

The EFA result showed that a 3-factors structure with 19 items was found suitable for the scale. The naming of the factors was made by considering both the content of the items and the literature. Because the items in the first factor were related to the support of the school management, it has been called "administrative support". Because the items in the second factor were related to cooperation between stakeholders, it has been called "collaborative structure". Because the items in the third factor were related to structural support, it has been called "structural support".

#### **Findings of Confirmatory Factor Analysis**

Following the EFA for the scale, CFA was carried out. CFA is a multivariate analysis that allows the testing of whether a defined construct is validated as a model (Cokluk et al., 2010). The representation powers of the items and the variance values explained by each item were examined with CFA in the study. While carrying out CFA, the fit indices for the scale were examined. It is recommended to report more than one fit index in structural equation models studies since each index provides different information about model fit (Harrington, 2009). Some fit indices were used when evaluating model fit. These fit indices, which are the most commonly used fit indices in structural equation modelling studies, are Chi-square, Comparative Fit Index (CFI), Non-normed Fit Index(NNFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Root Mean Square Residual (RMR), Standardized RMR (SRMR) (Kline, 2011). The fit indexes calculated in the first CFA are shown in Table 4. To improve the fit indexes of the first CFA, 2 modifications were made considering the theoretical structure and the nature of the analysis. The fit indexes calculated before and after the modification are shown in Table 4.

Indices	Before modification	After modification			
$\chi^2$	240.47	216.65			
Df	149	147			
χ²/Df	1.61	1.47			
NNFI(TLI)	0.93	0.95			
CFI	0.94	0.96			
RMSEA	0.064	0.056			
RMR	0.039	0.038			
SRMR	0.053	0.063			

 Table 4: CFA Fit Index Values of the Scale

The relevant literature was taken into consideration when evaluating the fit indices obtained. According to related literature, the fact that  $\chi^2$ /Df ratio is less than 3 indicates perfect fit and that less than 5 indicates good fit (Kline, 2011). In addition, the CFI and TLI values being  $\geq$ .95, are considered an indicator of a good fit (Hu & Bentler, 1999; Kline, 2011). RMSEA and SRMR values below .05 indicate a good fit value, and below .08 indicate an acceptable fit good value (Brown, 2006; Kline, 2011; Simsek, 2007). When the indexes calculated in DFA are examined, in this context, it can be interpreted that the current indexes show a good model fit. These findings reveal that the scale has structural validity.

Figure 2 shows the standardised analysis values between the three-factor model of the scale and the items in those factors. Standardised analysis values provide information on how well each item is its implicit variable (Şimşek, 2007).

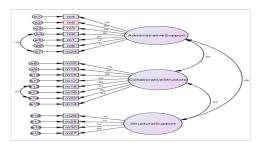


Figure 2: DFA standardised analysis values of the scale

As seen in Figure 2, the standardised analysis values of each item were between .45-.85. Also, all factor-item relationships were found significant at the .01 level. The high standardised analysis values obtained in DFA indicate the suitability of the structure obtained with EFA.

#### **Findings of Reliability Analysis**

Cronbach Alpha internal consistency coefficient was calculated within the scope of the reliability analysis. The Cronbach Alpha coefficient shows how consistent the test items are in their entirety (Büyüköztürk et al., 2014, pp. 111). The Cronbach alpha coefficients of the scale were calculated .91 for administrative support, .89 for collaborative structure, .74 for structural support, and .92 for the total scale. Item total correlation coefficients between .245 and .742. Kline (2011) states that the reliability coefficient is excellent around ".90", very good around ".80", sufficient around ".70", and insufficient under ".50". The total item correlation should be above .200. Gözüm and Aksavan (2003) stated that the total item correlation is not negative and that at least 0.20 is an acceptable limit. Therefore, it can be said that the calculated internal consistency coefficients are sufficient and good.

#### **Discussion and Conclusion**

Student achievement or improving student learning is very important in education (Akgündüz et al., 2015). Also, study shows that the most important factor affecting student achievement is teacher quality (Adesina et al., 2016: Caena, 2011; OECD, 2005, 2011; Sass, et al., 2012). Professional development comes first among the most important elements in ensuring the quality of the teacher (Hamdan & Lai, 2015; Kaçan, 2004; Özer, 2005). For this reason, PD is the cornerstone of educational reforms in recent years (Sandholtz & Ringstaff, 2013). Studies conducted in the last 30 years have provided to identify the characteristics of effective PD that will increase student achievement. It is emphasised that effective PD that will increase student achievement should be in a structure that encourages individual and organisational efforts, collaboration, active learning, and coherence (Dooner et al., 2008; Garet et al., 2001; Kwakman, 2003). To ensure effective PD, the characteristics of this structure should be determined

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and measured. However, studies conducted with the measurement tools adapted to measure this structure show that there are problems related to the measurement of the structure (Dervişoğulları, 2014; Öğdem, 2015). Therefore, it is aimed to develop a specific measurement tool for the Turkish culture that will measure this structure in the study.

Firstly, a 32-item trial form was created. The data were collected using a 32-item trial form that was examined in terms of comprehensibility and language. A three-factor structure with 19 items, explaining 61.43% of the variance, was obtained in the EFA made with the data obtained. The factor loads of the items are between .510 and .945. The fit index values ( $\chi^2$ /Df = 1.47, CFI = .96, TLI = .95, RMSEA = .056, RMR = .038, SRMR = .063) calculated in CFA to support the findings of the structure showed good fit (Brown, 2006; Hu & Bentler, 1999; Kline, 2011; Şimsek, 2007). The first factor of the scale, of which the 3-factor structure was confirmed with CFA, was named as " administrative support", the second factor as "collaborative structure", and the third factor as "structural support". Cronbach Alpha internal consistency coefficients are calculated as .91 for administrative support, .89 for collaborative structure, .74 for structural support, and .92 for the total scale. The scale's Cronbach Alpha coefficients were found to be sufficient (Kline, 2011).

As a result, the scale of perception of school characteristics that supports PD, which can measure the structure that supports teachers' participation in PD, consists of 19 items. A four-point Likerttype scale was used to determine the perception of teachers related to each item on the scale. Scoring of items is "absolutely disagree" = 1, "disagree" = 2, "agree" = 3, strongly agree "= 4. The minimum score obtained from the scale is 19, and the maximum score is 76. The high score to be obtained by scoring the scale indicates that the supporting characteristics of the school positively affect the teachers' perceptions about participation in PD. The results indicate that the scale is valid and reliable. It is a tool that can measure teachers' perceptions of supportive school characteristics that are effective in their participation in professional development.

#### Limitation and Further Studies

The analyses made in the study were made with the data collected at the individual level. But, to measure the characteristics of the school that support PD in a more valid and reliable way, multi-level factor analysis should also be made by collecting schoollevel data. Because the organisational dimension of this concept is also very important, more data from a larger number of schools is needed to make these analyses. Therefore, it will be useful to conduct these studies in the future.

#### References

- Adesina, Olusola Joseph, et al. "Teachers' Attitude, Years of Teaching Experience and Self-Efficacy as Determinants of Teachers' Productivity in Teachers' Professional Development Programme Ibadan in Metropolis, Oyo State, Nigeria." Journal of Emerging Trends in Educational Research and Policy Studies, vol. 7, no. 3, 2016, pp. 204-211.
- Akgündüz, Devrim, et al. *STEM Eğitimi Türkiye Raporu.* İstanbul Aydin Ünisversitesi, 2015.
- Barber, Michael, and Mona Mourshed. "How the World's Best-Performing Schools Systems Come Out on Top." *McKinsey & Company*, 2007.
- Bolam, Ray, et al. *Creating and Sustaining Effective Professional Learning Communities.* Research Report RR637, 2005.
- Brown, Timothy A. Confirmatory Factor Analysis for Applied Research. Guilford Press, 2006.
- Bubb, Sara, and Peter Earley. Leading & Managing Continuing Professional Development: Developing People, Developing Schools. Sage, 2007.
- Bümen, Nilay T., et al. "Teachers' Professional Development in Turkish Context: Issues and Suggestions." *Milli Eğitim*, no. 194, 2012, pp. 31-50.
- Büyüköztürk, Şener. Sosyal Bilimler Için Veri Analizi El Kitabı. Pegem Akademi, 2010.
- Büyüköztürk, Şener, et al. *Bilimsel Araştırma Yöntemleri*. Pegem Akademi, 2014.
- Caena, Francesca. Literature Review Quality in Teachers' Continuing Professional

Development. European Commission, 2011.

Can, Abdullah. SPSS ile Bilimsel Araştırma Sürecinde Nicel Veri Analizi. Pegem Akademi, 2014.

- Çokluk, Ömay, et al. Sosyal Bilimler Için Çok Degiskenli Istatistik. Pegem Akademi, 2010.
- Craft, Anna. Continuing Professional Development: A Practical Guide for Teachers and Schools. Routledge, 2002.
- Dervişoğulları, Mustafa. Profesyonel Öğrenme Topluluklarının Boyutlarına Ilişkin Öğretmen Görüşlerinin Incelenmesi. Marmara Üniversitesi, 2014.
- Dooner, Anne-Marie, et al. "Stages of Collaboration and the Realities of Professional Learning Communities." *Teaching and Teacher Education*, vol. 24, no. 3, 2008, pp. 564-574.
- Field, Andy. Discovering Statistics using SPSS Statistics. Sage Publications, 2009.
- Garet, Michael S., et al. "What makes Professional Development Effective? Results from a National Sample of Teachers." *American Educational Research Journal*, vol. 38, no. 4, 2001, pp. 915-945.
- Gözüm, S., and S. Aksayan. "Kültürlerarası Ölcek Uyarlamasi Icin Rehber II: Psikometrik Özellikler ve Kültürlerarası Karşılaştırma." *Hemsirelik Arastirma Gelistirme Dergisi*, 2002.
- Guskey, T.R. *Evaluating Professional Development*. Corwin Press, 2000.
- Hamdan, Abdul Rahim, and Chia Lai Lai. "The Relationship between Teachers' Factors and Effective Teaching." Asian Social Science, vol. 11, no. 12, 2015, pp. 274-280.
- Harrington, Donna. *Confirmatory Factor Analysis*. Oxford University Press, 2009.
- Hipp, Kristine Kiefer, et al. An International Perspective on the Development of Learning Communities. 2003.
- Ho, Robert. Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS. CRC Press, 2006.
- Hord, Shirley M. Professional Learning Communities: Communities of Continuous Inquiry and Improvement. 1997.
- Hu, Li-Tze, and Peter M. Bentler. "Cutoff Criteria for Fit Indexes in Covariance Structure

Analysis: Conventional Criteria Versus New Alternatives." *Structural Equation Modeling: A Multidisciplinary Journal*, vol. 6, no. 1, 1999, 1-55.

- İlgan, Abdurrahman, et al. "Evaluation of Professional Learning Comminity of Primary Schools." *Kastamonu Eğitim Dergisi*, vol. 19, no. 1, 2011, pp. 151-166.
- Kaçan, Gülbeyaz. "The Inclination of Professional Improvement of Teachers." Osmangazi Üniversitesi Sosyal Bilimler Dergisi, vol. 5, no. 1, 2004, pp. 57-66.
- Kalkan, Fatma. "Examining the Professional Learning Community Perceptions of Primary Education School Teachers in Terms of Certain Variables." *Electronic Turkish Studies*, vol. 10, no. 11, 2015, pp. 847-868.
- Kline, Rex B. *Principles and Practice of Structural Equation Modeling*. Guilford Press, 2011.
- Kwakman, Kitty. "Factors Affecting Teachers' Participation in Professional Learning Activities." *Teaching and Teacher Education*, vol. 19, no. 2, 2003, pp. 149-170.
- Liu, Hsiao-Wen, et al. "What Factors Affect Teachers in Taiwan in Becoming More Involved in Professional Development? A Hierarchical Linear Analysis." *Human Resource Development Quarterly*, vol. 25, no. 3, 2014, pp. 381-400.
- Musanti, Sandra I., and Lucretia Pence. "Collaboration and Teacher Development: Unpacking Resistance, Constructing Knowledge, and Navigating Identities." *Teacher Education Quarterly*, vol. 37, no. 1, 2010, pp. 73-89.
- Nye, Barbara, et al. "How Large Are Teacher Effects?" *Educational Evaluation and Policy Analysis*, vol. 26, no. 3, 2004, pp. 237-257.
- Teachers Matter: Attracting, Developing and Retaining Effective Teachers. OECD, http:// www.oecd.org/education/school/34990905
- Building a High-Quality Teaching Profession: Lessons from around the World. OECD Publishing, 2011.
- Olivier, Dianne F., et al. "Professional Learning Community Assessment." *Reculturing Schools as Professional Learning Communities*, edited

- Öğdem, Zeki. Mesleki Öğrenme Topluluğu Olarak Ilköğretim Okullarında Takım Liderliği ve Örgüt Iklimi. Gazi Üniversitesi, 2015.
- Özer, Bekir. "Ortaöğretim Öğretmenlerinin Mesleki Gelişime Ilgisi." *Journal of Educational Sciences & Practices*, vol. 4, no. 8, 2005.
- Rhoades, L., et al. "Affective Commitment to the Organization: The Contribution of Perceived Organizational Support." *Journal of Applied Psychology*, vol. 86, no. 5, 2001, pp. 825-836.
- Sanders, William L., and Sandra P. Horn. "Research Findings from the Tennessee Value-Added Assessment System (TVAAS) Database: Implication for Educational Evaluation and Research." *Journal of Personnel Evaluation in Education*, vol. 12, no. 3, 1988, pp. 247– 256.
- Sandholtz, Judith Haymore, and Cathy Ringstaff. "Assessing the Impact of Teacher Professional Development on Science Instruction in the Early Elementary Grades in Rural US Schools." *Professional Development in Education*, vol. 39, no. 5, 2013, pp. 678-697.
- Sass, Tim R., et al. "Value Added of Teachers in High-Poverty Schools and Lower Poverty Schools." *Journal of Urban Economics*, vol. 72, no. 2-3, 2012, pp. 104-122.
- Seferoğlu, Süleyman Sadi. "Elementary School Teachers Perceptions of Professional Development." *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, vol. 20, 2001, pp. 117-125.
- Shadur, Mark A., et al. "The Relationship between Organizational Climate and Employee Perceptions of Involvement: The Importance of Support." Group & Organization Management, vol. 24, no. 4, 1999, pp. 479-503.
- Smith, Thomas M., and Laura M. Desimone. "Do Changes in Patterns of Participation in Teachers' Professional Development Reflect the Goals of Standards-based Reform?." *Educational Horizons*, vol. 81, no. 3, 2003, pp. 119-129.
- Stoll, Louise, et al. "Professional Learning Communities: A Review of the Literature."

*Journal of Educational Change*, vol. 7, 2006, pp. 221-258.

Şimsek, Ömer Faruk. Yapısal Eşitlik Modellemesine Giris: Temel İlkeler ve LISREL Uygulamaları. Ekinoks Basın Yayın Dağıtım Ltd, 2007. Telese, James A. "Middle School Mathematics Teachers' Professional Development and Student Achievement." *The Journal of Educational Research*, vol. 105, no. 2, 2012, pp. 102-111.

#### Appendix (1) Ethics Committee Report

T.C. İNÖNÜ ÜNİVERSİTESİ BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulu						
Oturum Tarihi	Oturum Sa	ayısı	Karar S	ayısı		
08.03.2017	3		2017/3	3-2		
08.03.2017         3         2017/3-2           Karar No: 2017/3-2: Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etik Kurulu         08.03.2017 tarihinde Rektör Yardımcıları Toplantı odasında toplandı. İnönü Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Bölümünde Yrd. Doç. Dr. Ramazan ÖZBEK'in sorumlu araştırmacı olduğu; Fırat Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Bölümünde Arş. Gör.           Mehmet EROĞLU'nun "Öğretmenlerin Mesleki Gelişime Katılımlarıyla, Mesleki Gelişime Yönelik Tutumları, Kendi Kendine Öğrenmeye Hazır Bulunuşlukları ve Destekleyici Okul Özellikleri Araştırma ve Yayın Etiği Yönergesi açısından uygun olup-olmadığı hususundaki başvurusuna ilişkin raportör raporu görüşüldü. Çalışma Bilimsel Araştırma ve Yayın Etiği Yönergesi açısından değerlendirildiğinde çalışmada <u>herhangi bir etik kusur olmadığına;</u> oy birliği ile karar verilmiştir.						
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Prof. Dr. Cemal YURGA		-				
Etik Kurul Başkanı	OS I	< .				
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Prof. Dr. Ahmet F. SİNANOĞI	U CO		letin KARKIN	Allah		
Etik Kurul Başkan Yardımcısı	MAG	Etik Kurul Ü	yesi	Hund		
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Prof. Dr. Mustafa KUTLU Etik Kurul Üyesi	DA TEAL	Prof. Dr. H. S Etik Kurul Ü	uphi ERDEM	KATILMADI		
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### Appendix (2) Research Permit



T.C ELAZIĞ VALİLİĞİ Milli Eğitim Müdürlüğü

Sayı : 79137285-604.01.01-E.4143261 Konu : Araştırma İzni. 28.03.2017

#### VALÍLÍK MAKAMINA

İlgi :a) MEB'e Bağlı Okul ve Kurumlarda Yapılacak Araştırma, Yarışma ve Sosyal Etkinlik İzinleri 2012/13 sayılı Genelgesi,

 b)İnönü Üniversitesi Rektörlüğü Öğrenci İşleri Daire Başkanlığının 14/03/2017 tarih ve 50235129-100-E.5833 sayılı yazısı.

Danışmanlığını Yrd. Doç. Dr. Ramazan ÖZBEK'in, yaptığı İnönü Üniversitesi Eğitim Bilimleri Enstitüsü, Eğitim Bilimleri Anabilim Dalı Eğitim Programları ve Öğretimi Bilim Dalı doktora öğrencisi Mehmet EROĞLU'nun, "Öğretmenlerin Mesleki Gelişime Katılımlarıyla, Mesleki Gelişime Yönelik Tutumları, Kendi Kendine Öğrenmeye Hazır Bulunuşlukları ve Destekleyici Okul Özellikleri Arasındaki İlişkinin İncelenmesi" konulu tezinin anket çalışmasına veri oluşturmak amacıyla yapacağı anket çalışmasını Müdürlüğümüze bağlı İlimizdeki tüm kademelerdeki okullarda görev yapmakta olan öğretmenlere yönelik anket ve uygulama izin isteği, ilgi (b) yazı ile bildirilmiştir.

Konu ile ilgili olarak Müdürlüğümüz AR-GE Biriminde MEB'e bağlı Okul ve Kurumlarda Yapılacak Araştırma ve Araştırma Desteğine Yönelik İzin ve Uygulama Genelgesi'ne bağlı olarak oluşturulmuş olan Bilimsel Araştırma İzni Değerlendirme Komisyonu 28/03/2017 tarihinde Müdürlüğümüz Strateji Geliştirme Şubesi AR-GE Biriminde toplanarak başvuru hakkında gerekli incelemeyi yapmıştır. Söz konusu Anket, uygulama çalışmasının Müdürlüğümüze bağlı İlimizdeki tüm kademelerdeki okullarda görev yapmakta olan öğretmenlere yönelik gönüllülük esasına dayalı olarak, okul idarelerinin izni alınarak, çalışmaların eğitim öğretimi aksatmayacak şekilde **03 Nisan 2017 - 26 Mayıs 2017** tarihleri arasında yapılması Müdürlüğümüzce uygun görülmektedir.

Makamınızca da uygun görüldüğü takdirde olurlarınıza arz ederim.

İlhan MAKİNİST Müdür a. Şube Müdürü

OLUR 28.03.2017 Ahmet BAĞLITAŞ Vali a. Milli Eğitim Müdürü



Akpinar Mah.Kolordu Cad.No:5 23100 /ELAZIĜ Elektronik Ağ: http://elazig.meb.gov.tr e-posta: elazigmem@meb.gov.tr Ayrıntılı bilgi için: A.AKARSU-V.H.K.İ. Tel : (0 424) 238 50 24 Faks : (0 424) 233 36 70

Bu evrak gövenli elektronik imza ile imzalanmıştır. http://evraksorgu.meb.gov.tr adresinden 7c4e-3608-34d7-8be3-2a12 kodu ile tevit edil.

# Appendix 3: The Scale of Teachers' Perceptions About School Characteristics Supporting Professional Development

## Değerli Öğretmenler;

Bu çalışmanın amacı öğretmenlerin mesleki gelişimini destekleyici okul özelliklerini belirlemeye yönelik bir ölçme aracı geliştirmektir. Maddeleri yanıtlarken göstereceğiniz samimiyet, var olan durumun olduğu gibi ortaya konulması bakımından önemlidir. Bu nedenle lütfen maddeleri uygun şekilde doldurunuz. Araştırmada elde edilen veriler bilimsel amaçla kullanılacağından isim yazmanıza gerek yoktur. Göstereceğiniz ilgi ve katkılarınız için teşekkürler.

"Ke "Ka "Ka "Ke	fen her ifadeyiokuduktansonra size enuygungelenyanıtıişaretleyiniz. sinliklekatılmıyorm "ifadesiiçin - 1'i tılmıyorum "ifadesiiçin - 2'yi tılıyorum "ifadesiiçin - 3'ü sinliklekatılıyorum "ifadesiiçin - 4'ü fenhiçbirmaddeyiboşbırakmamayaçalışınız.	Kesinliklekatılmıyorm	Katılmıyorum	Katılıyorum	Kesinliklekatılıyorum
1	Okulumuzdaki öğretmenler, okulla ilgili karar alma süreçlerine(aktif) katılırlar.	(1)	(2)	(3)	(4)
2	Okulumuzdaki öğretmenlere okulda değişim/gelişim yaratması için fırsat verilir.	(1)	(2)	(3)	(4)
3	Okulumuzdaki yöneticiler, yenilikçi girişimlerde sorumluluğu ve ödülü öğretmenlerle paylaşır.	(1)	(2)	(3)	(4)
4	Okulumuzda çalışanların (yöneticiler, öğretmenler) öncülük/liderlik davranışları desteklenir.	(1)	(2)	(3)	(4)
5	Okulumuzdaki yöneticiler, gücü ve yetkiyi öğretmenlerle demokratik bir şekilde paylaşır.	(1)	(2)	(3)	(4)
6	Okulumuzdaki yöneticiler, çalışanların sorunlarını sezer ve çözüm üretirler.	(1)	(2)	(3)	(4)
7	Okulumuzda öğretmenler ihtiyaç duydukları her bilgiye ulaşabilirler.	(1)	(2)	(3)	(4)
8	Okulumuz paydaşları öğrenci başarısını artırma konusundaki (içsel) sorumluluklarının bilincindedir.	(1)	(2)	(3)	(4)
9	Okulumuzun vizyonu bütün çalışanların görüşleriyle oluşturulmuştur.	(1)	(2)	(3)	(4)
10	Okulumuz çalışanları öğrenci başarısının artırılmasına odaklanan okul vizyonunu paylaşırlar.	(1)	(2)	(3)	(4)
11	Okulumuz çalışanları ortak değerleri(ör. öğrenci başarısını isteme) geliştirmek için birlikte çalışırlar.	(1)	(2)	(3)	(4)
12	Okulumuzda alınan kararlar okulumuzun değerleri ve misyonu/vizyonu ile tutarlıdır.	(1)	(2)	(3)	(4)
13	Okulumuzun ortak değerleri, eğitim öğretim faaliyetlerine yön verir.	(1)	(2)	(3)	(4)
14	Okulumuz paydaşlarının(yöneticiler-öğretmenler-veliler) öğrencilere ilişkin yüksek başarı beklentisi vardır.	(1)	(2)	(3)	(4)
15	Okulumuzdaki öğretmenler, mesleki ve kişisel yönden kendilerini geliştirmek için birlikte çalışırlar.	(1)	(2)	(3)	(4)
16	Okulumuzdaki öğretmenler, mesleki ve kişisel yönden kendilerini geliştirmek için ortak inanca sahiptirler.	(1)	(2)	(3)	(4)
17	Okulumuzdaki öğretmenler, işbirliği içinde öğrenme fırsatlarına sahiptir.	(1)	(2)	(3)	(4)
18	Okulumuzdaki öğretmenler arasında farklı görüşlere saygı duyulur.	(1)	(2)	(3)	(4)

19	Okulumuzda mesleki gelişim, öğrenme-öğretme süreçlerinin iyileştirilmesine odaklanmaktadır.	(1)	(2)	(3)	(4)
20	Okulumuzdaki öğretmenler birlikte öğrenmeye ve sorun çözmeye isteklidir.	(1)	(2)	(3)	(4)
21	Bu maddede herhangi bir işaretleme yapmayınız.	(1)	(2)	(3)	(4)
22	Okulumuzda çalışanlar arasında karşılıklı saygı ve güvene dayalı bir ilişki vardır.	(1)	(2)	(3)	(4)
23	Okulumuzda güven ve saygı kültürü olduğundan yapılacak bir iş/girişim için risk alınmaktan çekinilmez.	(1)	(2)	(3)	(4)
24	Okulumuzda önemli başarılar takdir edilir ve kutlanır.	(1)	(2)	(3)	(4)
25	Okulumuzun paydaşları okulda değişim/gelişim için sürekli çaba sarf ederler.	(1)	(2)	(3)	(4)
26	Okulumuzda çalışanların işbirliği yapması için zaman ayrılır.	(1)	(2)	(3)	(4)
27	Okulumuzda öğretmenlerin ders programı birlikte öğrenmeyi ve öğrenilenlerin paylaşılmasını destekleyecek şekildedir(örneğin; zümrelerin ders saatlerinin aynı zamanda boş olması gibi)	(1)	(2)	(3)	(4)
28	Okulumuzda öğretmenlerin mesleki gelişimi için ayrılan mali/finansal kaynaklar yeterlidir.	(1)	(2)	(3)	(4)
29	Okulumuzda öğretmenlerin mesleki gelişimi için uygun teknolojik alt yapı ve öğretim materyali bulunmaktadır.	(1)	(2)	(3)	(4)
30	Okulumuzda öğretmenlerin mesleki gelişimi için gerekli olduğu zamanlarda uzman desteği sağlanır.	(1)	(2)	(3)	(4)
31	Okulumuzda öğretmenlerin birlikte veya bireysel çalışabilecekleri alanlar(toplantı odası, salon vs) yeterlidir.	(1)	(2)	(3)	(4)
32	Okulumuzdaki çalışanlar arasında sağlıklı bilgi akışına imkan tanıyan bir iletişim sistemi vardır.	(1)	(2)	(3)	(4)
33	Okulumuzun iletişim sistemi/yapısı okulumuzdan etkilenen herkesi bilgilendirici niteliktedir	(1)	(2)	(3)	(4)

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