Evaluation of TALIS 2018 Results in the Context of Professional Development: Turkey Sample

By Ümit Kahraman[*] & Osman Tayyar Çelik[±]

In this research, participation in professional development (PD) activities, perceptions of PD needs and barriers for PD, and differences in terms of seniority were examined in Turkey sample based on the Teaching and Learning International Survey (TALIS) 2018 data. A total of 15,498 teachers, including 3,204 primary school teachers, 3,952 secondary school teachers and 8,342 high school teachers, were included in the sample of the study. The results of the research show that teachers participate more in-service trainings within the scope of mandatory PD policies. Peer observation, coaching, and observation visits to workplaces, public institutions or non-governmental organizations and other schools are the least PD activities that teachers participate. Teachers need PD more in the field of teaching students with special needs and in multicultural or multilingual environments. According to teachers, the biggest barriers to PD are the lack of any incentives and support to participate in PD, incompatibility with the work schedule and the lack of appropriate PD activity. In addition, PD activities that teachers participate in, PD needs and barriers to PD are significantly different in terms of seniority. The results were discussed in terms of PD literature and Turkey context and suggestions have been made based on the results.

Keywords: TALIS, OECD, teacher development, professional development, barriers for development

Introduction

There has been an increasing interest in the professional development (PD) of teachers since the early years of the 21st century. With great emphasis on the quality of teachers, the teachers' participation in PD activities has become one of the most controversial educational issues both in research and policy settings (Gümüş, 2013). Reasons for PD also differ from each other significantly (Imants & van Veen, 2008). Changes in society and education reforms (Hoekstra, 2007; Hoekstra et al., 2009; Vermunt & Endedijk, 2011), changes in teachers' roles in transferring traditional knowledge (Kwakman, 2003), seeing teachers as a key factor in student performance and school success (Heystek & Terhoven, 2015; İlğan, 2017; Opfer & Pedder, 2011; Shoshani & Eldor, 2016), and education system's ability to remain competitive globally (Bayar, 2014) are the prominent reasons. Teachers need to continually improve and update their skills to help students become competent, competitive and socially integrated adults (OECD, 2005).

[*]Assistant Professor, Bilecik Seyh Edebali University, Turkey.
[±]Assistant Professor, İnönü University, Turkey.

Teachers are also learners who are directing their PD as part of the profession. For this reason, continuous PD tools have become an important need to increase the knowledge and skills of teachers and to improve their beliefs about education. In addition, high quality PD is an essential component of almost all modern suggestions to raise academic standards. Policy-makers increasingly recognize that schools cannot be better than teachers and administrators who work within them (Guskey, 2002). As a matter of fact, in the study conducted by Opfer and Pedder (2011), it was concluded that according to the classification made by the National Foundation of Educational Research (NFER) of England, there are PD structures suitable for effective professional learning characteristics in schools in the high achievement band. There is also evidence that teacher learning (Buczynski & Hansen, 2010) and prolonged PD activities (Darling-Hammond et al., 2009) affect student achievement.

While the impact of PD on teacher quality and student achievement becomes clear, the characteristics of effective PD and effective PD models, and the factors affecting teachers' participation in PD activities have become the main research topics. On the other hand, various PD models (Desimone, 2009; Guskey, 2002; Opfer & Pedder, 2011) have been developed for effective PD designs. However, a "one size fits all" approach (Darling-Hammond et al., 2009) is criticized severely when designing PD since a PD activity may be an important learning tool for one teacher but not for another. A more holistic approach needs to be developed in order to reduce the waste of time, money and effort in PD and to ensure effective teacher learning (Cameron, Mulholland, & Branson, 2013). This requires considering various school levels, individual characteristics of teachers, and contextual conditions when planning PD.

The PD of teachers has become an important theme in international assessment researches such as Teaching and Learning International Survey (TALIS), Programme for International Student Assessment (PISA), and Trends in International Mathematics and Science Study (TIMMS). Among them, especially TALIS focuses on the structures and stakeholders in education systems. Since the first application in 2008, PD of teachers has been considered as an important theme. Under this theme, PD activities that teachers participate, their needs, and supports and barriers for participation are discussed in detail. Just as student learning requires sensitivity to individual needs, effective PD of teachers should be designed based on different needs and opportunities. In this context, this research aims to reveal these differences in terms of seniority according to the results of TALIS 2018 based on the sample of primary, secondary and high school teachers in Turkey.

Literature Review

Professional Development

PD is a systematic cornerstone of reform efforts to increase teachers' capacity to provide qualified teaching (Özer & Anıl, 2014). Although the concept of PD

has a long history, there is no agreed-upon definition by researchers. Avalos (2011) defines PD as how teachers learn, how they learn to learn and how they perform their knowledge to support students' learning; OECD (2009) defines PD as activities that improve the knowledge, skills and expertise of the individual; and Guskey (2002) defines it as systematic efforts to change teachers' classroom practices, attitudes and beliefs, and thus learning outcomes. The definitions emphasize two main characteristics of PD; PD is a learning process for teachers and the aim is to improve learning outcomes. A qualified PD can be said to make positive contributions to teacher learning, improve teachers' knowledge and skills, help them develop positive attitudes and beliefs towards the profession, improve their teaching practices and ultimately promote student learning.

In the literature, the PD of teachers is expressed with different concepts such as continuous PD, professional learning and teacher learning. These concepts emphasize different aspects of PD. While continuous PD indicates that this is a process and requires continuity, professional learning or teacher learning emphasizes teachers' taking responsibility through different activities.

When it comes to the PD of teachers, the first thing that comes to mind is traditional approaches such as in-service training, seminars, and courses. However, although traditional PD models are quite common, they are criticized for being ineffective in providing sufficient time, activity, and content to increase teachers' knowledge and to encourage meaningful changes in classroom practices (Abu-Tineh & Sadiq, 2018). In this context, instead of traditional in-service trainings, models based on interaction and informal learning such as mentoring, coaching and peer observation come to the fore. Defining the characteristics or combinations of characteristics that define effective continuing PD activities is one of the main policy challenges in ensuring continuous PD (OECD, 2019a). It can be said that a certain consensus has been reached in the literature about the characteristics of high-quality PD (Desimone et al., 2002; İlğan, 2017). It is possible to summarize them as follows (Darling-Hammond, Hyler, & Gardner, 2017; Guskey, 2003; İlğan, 2017; Kedzior & Fifield, 2004; Labone & Long, 2016):

- Focus on the content.
- Reflection and feedback.
- Self-assessment.
- Compliance with teachers' knowledge and beliefs, as well as wider school and system-based policies.
- Being a part of daily work.
- Active learning opportunities.
- Connection to high standards.
- Opportunities for teachers to engage in leadership roles.
- Cooperation and continuity.
- Participation of teachers in the same school, class or department.

As a PD tool, teachers have many professional learning resources. These can generally be stated as formal and informal learning resources. Formal learning takes place in a more structured, classroom-like educational environment, while

informal learning does not require a specific place or even a teacher or an instructor (Lecat, Beausaert, & Raemdonck, 2018). Postgraduate and in-service trainings can be evaluated within the context of formal learning. Informal learning resources are more diverse. Errors as a result of experience (Atmaca, 2020), non-compulsory collaborative structures, reading books and researching on web, or implicit learning in the context of the workplace are examples of informal learning. In the synthesis study conducted by Kyndt, Gijbels, Grosemans, and Donche (2016), it was determined that the most frequently defined learning activities in research studies are reading professional literature, observation, collaboration with colleagues, and learning through reflection and experience.

OECD (2019a) draws attention to three main components for the PD programs to be developed, which are needs, support and barriers. Studies and improvements in these areas may enable the design of effective PD programs. PD needs and barriers for PD are discussed below along with the related literature. The Turkish Education System has a central structure and there are no support structures that can change in terms of different variables. In addition, PD support was not addressed in the current study since local education administrators and school administrators do not have a wide range of resources and competencies in PD support.

PD Needs of Teachers

The first question to be asked in the planning of PD of teachers is "What do teachers want to learn?" An effective PD is expected to meet the needs of teachers. Considering profession-specific competencies, these needs can be classified as professional knowledge, professional skills and professional attitudes and values (MoNE, 2017). In this context, field knowledge, pedagogical content knowledge and legislative knowledge are related to professional knowledge; measurement and evaluation, managing and planning the teaching process are related to professional skills; and finally, beliefs and emotions are related to the professional attitudes and values. The needs of teachers in these areas differ to a great extent (Zhang, Shi, & Lin, 2020).

An important feature of effective PD practices is its being teacher-oriented (Kedzior & Fifield, 2004). PD activities must be sensitive to teachers' needs that arise as a result of teachers' self-assessment. However, Petrie and McGee (2012) stated that many PD practices were applied homogeneously and various learning needs of teachers who have different teaching experiences, worked in different school settings are less considered while designing PD activities.

While PD activities are planned according to the needs of teachers, PD activities are also needed in reform processes. While designing PD activities in this process, it is important to identify the knowledge and skills that teachers will need or the aspects that need to be developed for the success of the reform.

Barriers for PD

While creating opportunities for effective PD, barriers for access to PD should also be considered. However, Darling-Hammond et al. (2009) stated that many teachers do not have access to qualified PD activities. PD by its nature creates opportunities for teachers to be responsible for professional learning and practice, but it also brings new demands to school administrators and education policymakers (Kedzior & Fifield, 2004). In this context, The Irish Council for Education (TCI) considers commitment to PD a responsibility and access a right (King, 2016). Such an approach makes policy development necessary for barriers for participation in PD.

Kedzior and Fifield (2004) classify barriers for teachers' participation in PD under five categories. These are the structure of PD and teachers' time, the content of PD, the school factor, the district factor and the cost. In a national study conducted by Can (2019), barriers for PD are classified as legal, pedagogical, managerial and social reasons. In addition, according to the teachers who participated in the research (Can, 2019), lack of career development of teachers, lack of purpose and motivation in teachers, uncertainty in education policies, inadequate teacher employment, and constant change of education system are seen as the main barriers for PD. As a result, it can be said that the barriers for PD of teachers are caused by individual, organizational and educational policies, staff policies in particular. It is important to develop policies in different areas to eliminate these obstacles.

Turkey Context

Despite the impact of effective PD activities on teacher quality and ultimately student achievement, these issues were not adequately addressed by policy makers in Turkey (Bellibas & Gumus, 2016) and effective models for teachers' PD could not be developed. The Turkish education system has a hierarchical and centralized structure. It is also possible to see the reflections of the centralist approach in the PD of teachers. In this context, there is the Directorate General for Teacher Training and Improvement (DGTTI) within the Ministry of National Education (MoNE). Candidacy trainings for newly-employed teachers, in-service trainings, determining teacher qualifications and development of competencies are planned by DGTTI. In Turkey context, in-service training plays an important role in teachers' PD in traditional terms. The needs are determined and in-service trainings are carried out taking into consideration the questionnaires applied to teachers and international evaluation results such as TALIS and PISA. According to Özdemir (2016), the most traditional forms of PD might be workshops that are typically applied in in-service training, short seminars and courses. These are often criticized in terms of being one-time activities, unrelated to teachers' needs and not providing continuity. Research conducted in Turkey for in-service training, there are positive research results that in-service training practices provide an increase in the knowledge of teachers (Önen, Mertoğlu, Saka, & Gürdal, 2009) and teachers consider in-service training as a tool for PD (Akyıldız, Yurtbakan, & Tok, 2019).

In addition to this, in-service trainings are usually carried out during the education-training period rather than summer vacation, as the participation will be less. However, this situation makes it difficult for teachers to participate in in-service trainings, and causes problems in the training of the program in the classroom of the teachers participating in the training.

In different research, it is reported that in-service trainings are useless/ insufficient, the people who are in charge of these trainings are unqualified, these trainings are just a kind of information transfer, their content is not well structured, they are short-lived and cannot be put into practice as a PD application due to their inefficiencies (Sıcak & Parmaksız, 2016; Uçar & İpek, 2006; Uştu, Taş, & Sever, 2016; Yalçın İncik & Akbay, 2018). Considering the current research results, it can be said that in-service training practices in Turkey do not have a desirable effect on the PD of teachers. Needs are the basis of motivation. It is clear that PD programs that are not geared towards the needs of teachers and not designed for practice cannot serve the purpose.

Another practice considered as a form of PD in the Turkish Education System is professional trainings held for a period of two weeks immediately after the closing of the schools and before they are re-opened. In these trainings, teachers generally share their opinions about teaching methods and techniques, teaching materials, curriculum and attainment, PD classroom management and academic achievement (DGTTI, 2019). This application is an opportunity to make plans and evaluations and to share experiences in collaboration. In the practices for the evaluation of these programs, which are also called vocational seminars (Kahyaoğlu & Karataş, 2019; Türker & Tok, 2018), it was reported that the teachers see these programs as dysfunctional and that they describe them as a waste of time. In addition, teachers have stated that these programs can be instructive and they can contribute to PD with good planning. Besides, in Turkey, some regulatory mechanisms in the form of meetings for teachers have been mandated by the Ministry of National Education (MoNE) in order to create learning communities and encourage inclusion. Thus, teachers can share and discuss effective practices applied in their classrooms (Bellibas, Bulut, & Gedik, 2017). In schools, time and financial resources are needed to develop such opportunities into an effective PD tool. In addition, increasing the collaborative learning culture and teacher motivation at school will support such structures.

Teachers have an important role in the success of educational reforms. In order for reform initiatives to be successful, PD of teachers should be supported in the related field. As a matter of fact, the 2023 Education Vision Document declared by the Ministry of Education in 2019 highlighted the key roles of teachers and teacher qualifications in implementing the reforms. With this declaration, it is planned to make postgraduate education compulsory for the PD of teachers, to reconsider career steps, and to implement cooperation with universities and non-governmental organizations. Within the scope of "2023 Education Vision", various attempts have been made to motivate teachers across the country and raise awareness through conferences and seminars. However, structural arrangements and practices to improve teachers' professional knowledge and skills have not been implemented yet.

TALIS 2018

The International Teaching and Learning Survey (TALIS), conducted by the OECD for the purpose of evaluating education systems and educational policies, was held in 2018 for the third time. School principals and teachers from different school levels (primary, secondary and high schools) from 48 countries participated in the study (OECD, 2019a). Results for overall assessment and PD dimension of Turkey for TALIS-2018 have been summarized as follows (OECD, 2019a; TEDMEM, 2019):

In OECD countries and their economies, the percentage of teachers who have participated in at least one PD activity in the last 12 months is 94.5%, whereas in Turkey this rate is 93.6%.

As in OECD countries and their economies (OECD average 94%), in Turkey (86%) the most common PD activity attended by teachers is in-service training.

Among OECD countries and economies, and in Turkey, teachers report that the most preferred feature in effective PD activities is activities based on teachers' prior knowledge.

Among OECD countries and economies, teachers need education most in the field of education of students with special needs (22.2%), whereas in Turkey teachers need PD in the field of communication with people from different cultures and/or countries.

Among OECD countries and economies, the biggest barrier for PD for teachers is the conflict of PD activities with working hours (54.4%), whereas in Turkey (68.7%) there is not enough incentive to participate in PD activities.

In the literature, there are intense criticisms of top-down PD activities that are prepared in a standard way without taking the individual needs of teachers into account. In this context, it is important to consider some differences when planning PD activities. This research aims to determine the PD activities that teachers participated, PD needs of teachers and barriers for PD according to the data obtained from TALIS 2018 Turkey report. In addition, variation by seniority in the relevant fields has also been studied.

Methodology

Research Model

In this study, it is aimed to determine teachers' PD orientations, PD needs and the barriers for PD. The study was designed in screening model. The screening model is a research model that aims to describe a situation which is in the past or still exists (Karasar, 2007).

Work Group

The study group of the research consists of 15,498 teachers who participated in TALIS 2018 survey from Turkey. 3,204 of the teachers are primary school

teachers, 3952 of them are secondary school teachers and 8342 of them are high school teachers. Information about the participants is shown in Table 1.

Table 1. Demographic Data of the Participants

Variable		Elementary School		Secondary School		High School		Total	
		N	%	N	%	N	%	N	%
Gender	Woman	2,074	64.7	2,286	57.8	3,834	46.0	8,194	52.9
	Man	1,130	35.3	1,666	42.2	4,508	54.0	7,304	47.1
Seniority	5 years and under	286	8.9	970	24.5	1,530	18.3	2,786	18.1
	6 years and above	2,886	90.1	2,956	74.8	6,774	81.2	12,616	81.9
	Missing value	32	1.0	26	0.7	38	0.5	96	0.6

Data Collection Tool

TALIS 2018 (Teaching and Learning International Survey) teacher questionnaire was used as data collection tool in the study. The questionnaire consists of 10 sections: "Background and Qualification, Current Work, PD, Feedback, Teaching in General, Teaching in the Target Class, Teaching in Diverse Environments, School Climate, Job Satisfaction and Teacher Mobility". In the current study, the answers given to the questions of seniority in the "Background and Qualification" section and the participation in the PD activities, PD needs and barriers for PD from the "PD" section, are examined.

Seniority

In TALIS 2018 teacher survey, seniority data was collected with the question "Year (s) working as a teacher in total" in 11 (a). In the survey, teachers were not given options and asked to write down their tenure (years of seniority) themselves. These data, which are continuously variable within the scope of the research, were categorized by dividing them into two different seniority groups as 5 years and less and 6 years and more.

Participating in PD Activities

The data about teachers' participation in PD activities in the last 12 months was collected by question 22 of the questionnaire with the question "During the last 12 months, did you participate in any of the following PD activities?"
Needs for PD

Teachers' PD needs were tried to be determined with 14 sub-questions related to the root question "For each of the areas listed below, please indicate the extent

to which you currently need PD". "Knowledge and understanding of my subject field (s)", "ICT (information and communication technology) skills for Teaching", "Approaches to individualized learning" are sub-question samples. Each question can be scored from 1 (No need at present) to 4 (High level of need).

Barriers for PD

The barriers for PD of teachers are tried to be determined with seven 14 sub-questions related to the root question "How strongly do you agree or disagree that the following present barriers for your participation in PD?" Each question can be scored from 1 (Strongly disagree) to 4 (Strongly agree).

Data Analysis and Limitations

Depending on the research questions, Chi-square analysis was employed to test whether categorical variables (seniority and participation in PD activities) are connected. For the tests to be used in examining the PD needs and obstacles to PD in terms of seniority, the skewness-kurtosis coefficients were examined. Since the coefficients were found to be between -2 and +2 for each question (See Table 4 and Table 6), t-test and Anova tests, which are parametric tests, were used. In the analysis, missing data was evaluated for each question and calculations were made separately. Therefore, there are differences in the number of samples among the questions.

<div align="center">

Results

</div>

Participating in PD Activities

PD activities that teachers have participated in the last 12 months are given in Table 2. According to the data in Table 2, teachers mostly contribute to their PD by participating in course/seminar activities (N=12,947; 83.5%). Afterwards, reading professional literature (N=10,936; 70.6%) is another PD activity preferred by teachers. Teachers were engaged in peer observation/self-observation the least (N=3,008; 19.4%). Apart from these, they participated in observation visits to business premises, public organisations, or non-governmental organisations (N=3,355; 21.6%) and observation visits to other schools respectively.

Table 2. Participating PD Activities Last 12 Months

During the last 12 months, did you participate in any of the following PD activities?	Yes		No		Rank
	N	%	N	%	
Courses/seminars attended in person	12,947	83.5	2,404	15.5	1
Online courses/seminars	6,811	43.9	8,491	54.8	4
Education conferences where teachers and/or researchers present their research or discuss educational issues	8,474	54.7	6,840	44.1	3
Formal qualification programme (e.g., a degree programme)	4,945	31.9	10,367	66.9	7
Observation visits to other schools	3,620	23.4	11,704	75.5	8
Observation visits to business premises, public organisations, or non-governmental organisations	3,355	21.6	11,956	77.1	9
Peer and/or self-observation and coaching as part of a formal school arrangement	3,008	19.4	12,294	79.3	10
Participation in a network of teachers formed specifically for the PD of teachers	6,413	41.4	8,874	57.3	5
Reading professional literature	10,936	70.6	4,383	28.3	2
Other	5,394	34.8	8,863	57.2	6

The relationship between teachers' participation in PD activities in the last 12 months and seniority is given in Table 3. Chi-Square analysis was used to determine the relationship between seniority and PD activities attended by teachers in the last 12 months. It has been found that there is no significant relationship between participation in a network of teachers formed specifically for the PD of teachers and seniority ($x^2(1)=3,456$; $p>0.05$). A significant relationship was found at the level of 0.05 between all other activity areas and seniority. The "observed" and "expected" frequency values were examined to determine which group the relationship favors the most. It can be said that, teacher with low seniority are more likely to participate in the activities "Courses/seminars attended in person", "Formal qualification programme (e.g., a degree programme)", "Observation visits to other schools", "Observation visits to business premises, public organisations, or non-governmental organisations" compared to senior teachers. On the other hand, senior teachers prefer "Online courses/seminars", "Education conferences where teachers and/or researchers present their research or discuss educational issues" and "Reading professional literature" activities more compared to teachers with low seniority.

Table 3. Participating in PD Activities Last 12 Months in Terms of Seniority

Year of Sen.	Participating in PD activities	Yes		No			
		C.	Ex.C	C.	Ex.C	Total	
0-5	Courses/seminars attended in person	2374	2325	382	430	2756	$x^2_{(1)}=7.882$ $p<0.05$
6+		10533	10581	2007	1958	12540	
0-5	Online courses/seminars	1076	1223	1672	1524	2748	$x^2_{(1)}=38.92$ $p<0.05$
6+		5711	5563	6789	6936	12500	
0-5	Education conferences where teachers and/or researchers present their research or discuss educational issues	1464	1523	1288	1228	2752	$x^2_{(1)}=6.338$ $p<0.05$
6+		6983	6923	5524	5583	12507	
0-5	Formal qualification programme (e.g., a degree programme)	1007	889	1747	1864	2754	$x^2_{(1)}=27.81$ $p<0.05$
6+		3923	4040	8581	8643	12504	
0-5	Observation visits to other schools	724	648	2027	2102	2751	$x^2_{(1)}=13.92$ $p<0.05$
6+		2877	2952	9641	9565	12518	
0-5	Observation visits to business premises, public organisations, or non-governmental organisations	680	601	2071	2149	2751	$x^2_{(1)}=16.13$ $p<0.05$
6+		2654	2732	9851	9772	12505	
0-5	Peer and/or self-observation and coaching as part of a formal school arrangement	760	540	1989	2208	2749	$x^2_{(1)}=135.9$ $p<0.05$
6+		2236	2455	10263	10043	12499	
0-5	Participation in a network of teachers formed specifically for the PD of teachers	1110	1153	1638	1594	2748	$x^2_{(1)}=3.456$ $p>0.05$ ns[a]
6+		5284	5240	7200	7243	12484	
0-5	Reading professional literature	1889	1966	864	786	2753	$x^2_{(1)}=12.90$ $p<0.05$
6+		9012	8934	3499	3576	12511	
0-5	Other	1028	966	1528	1589	2556	$x^2_{(1)}=7.786$ $p<0.05$
6+		4342	4403	7310	7248	11652	

Sen=Seniority; a=ns means not significant C.: Count   Ex. C: Expected Count.

Needs for PD

The results of descriptive statistics of teachers' PD needs are given in Table 4. Examining the results of the descriptive statistics of teachers' PD needs, it can be said that teachers need support in communicating with people who come from different cultures and countries ($\bar{x}=2.53$). In addition, teachers need more PD in the fields of teaching in multicultural or multilingual environments ($\bar{x}=2.43$) and teaching students with special needs ($\bar{x}=2.37$) compared to other fields. The

minimum PD needs of teachers are subject knowledge and understanding of subject fields (x̄=1.58), pedagogical competence (x̄=1.63) and student behaviors and classroom management (x̄=1.69).

Table 4. Needs for PD

Needs for PD	n	x̄	S	Skew.	Kurt.	Rank
Knowledge and understanding of my subject field(s)	15,317	1.58	0.819	1.300	0.852	13
Pedagogical competencies in teaching my subject field(s)	15,293	1.70	0.846	0.975	0.059	10
Knowledge of the curriculum	15,291	1.63	0.858	1.188	0.463	12
Student assessment practices	15,257	1.72	0.876	0.983	-0.005	9
ICT (information and communication technology) skills for teaching	15,237	2.09	0.945	0.369	-0.907	4
Student behaviours and classroom management	15,267	1.69	0.894	1.098	0.177	11
School management and administration	15,200	1.92	0.999	0.667	-0.810	7
Approaches to individualised learning	15,239	2.06	0.971	0.450	-0.895	5
Teaching students with special needs	15,220	2.37	1.041	0.084	-1.189	3
Teaching in a multicultural or multilingual setting	15,170	2.43	1.123	.037	-1.380	2
Teaching cross-curricular skills (e.g.,creativity, critical thinking, problem solving)	15,190	2.00	0.956	0.540	-0.778	6
Analysis and use of student assessments	15,200	1.83	0.910	0.774	-0.419	8
Teacher-parent co-operation	15,233	1.70	0.933	1.108	0.097	10
Communicating with people from diff. cultures or countries	15,215	2.53	1.131	-0.087	-1.383	1

Skew.=Skewness; Kurt=Kurtosis.

The results of the examination of the PD needs of teachers according to seniority are given in Table 5. According to Table 5, it can be said that teachers with low seniority have higher PD needs than teachers with high seniority in all sub-fields (p<0.05). Although theoretical information is given to prospective teachers in teacher education, teaching is also a profession in which learning continues in practice. For this reason, teachers with high seniority increase their skills both through their experiences during the actual teaching practices and the educational activities they participate in. Therefore, teachers with low seniority can be expected to feel the need for PD more.

Table 5. Teachers needs for PD according to Seniority

Needs for PD	Sen. (Year)	n	$\bar{x}$	s	p
Knowledge and understanding of my subject field(s)	0-5	2,747	1.75	0.867	0.00
	6 +	12,515	1.54	0.805	
Pedagogical competencies in teaching my subject field(s)	0-5	2,744	1.86	0.871	0.00
	6 +	12,494	1.67	0.837	
Knowledge of the curriculum	0-5	2,743	1.77	0.895	0.00
	6 +	12,493	1.60	0.847	
Student assessment practices	0-5	2,732	1.84	0.899	0.00
	6 +	12,471	1.69	0.868	
ICT (information and communication technology) skills for teaching	0-5	2,731	2.14	0.958	0.00
	6 +	12,451	2.08	0.942	
Student behaviours and classroom management	0-5	2,737	1.89	0.936	0.00
	6 +	12,475	1.64	0.878	
School management and administration	0-5	2,734	2.18	1.029	0.00
	6 +	12,411	1.86	0.983	
Approaches to individualised learning	0-5	2,732	2.20	0.976	0.00
	6 +	12,452	2.03	0.967	
Teaching students with special needs	0-5	2,735	2.52	1.001	0.00
	6 +	12,430	2.33	1.046	
Teaching in a multicultural or multilingual setting	0-5	2,726	2.56	1.070	0.00
	6 +	12,390	2.40	1.133	
Teaching cross-curricular skills (e.g.,creativity, critical thinking, problem solving)	0-5	2,729	2.08	0.942	0.00
	6 +	12,407	1.98	0.959	
Analysis and use of student assessments	0-5	2,733	1.94	0.915	0.00
	6 +	12,412	1.81	0.908	
Teacher-parent co-operation	0-5	2,734	1.86	0.976	0.00
	6 +	12,445	1.67	0.921	
Communicating with people from diff. cultures or countries	0-5	2,736	2.60	1.105	0.00
	6 +	12,425	2.52	1.137	

Sen: Seniority.

Barriers for PD

According to the teachers, results of the descriptive statistics regarding the barriers for participation in PD activities are given in Table 6.

Table 6. Barriers for PD

Barriers for PD	n	x̄	S	Skew.	Kurt.	Rank
I do not have the pre-requisites (e.g., qualifications, experience, seniority)	15,257	1.49	0.697	1.430	1.785	7
PD is too expensive	15,252	2.30	0.848	0.152	-0.611	5
There is a lack of employer support	15,179	2.56	0.892	-0.142	-0.721	2
PD conflicts with my work schedule	15,179	2.55	0.867	-0.158	-0.643	3
I do not have time because of family responsibilities	15,250	2.25	0.921	0.190	-0.856	6
There is no relevant PD offered	15,218	2.52	0.870	-0.037	-0.677	4
There are no incentives for participating in PD	15,277	2.83	0.904	-0.451	-0.534	1

Skew.=Skewness; Kurt= Kurtosis.

According to teachers, the biggest barriers for participating in PD activities are the lack of any incentives (x̄=2.83) and lack of employer support. In addition, incompatibility with the work schedule (x̄=2.55) and lack of relevant PD activity (x̄=2.52) can also be seen as other important factors. According to teachers, not having pre-requisites (x̄=1.49) and not having time because of family responsibilities (x̄=2.25) are the barriers that affect the participation in PD activities the least.

The results of the examination of the barriers for PD according to seniority are given in Table 7.

Table 7. Barriers for PD According to Seniority

Barriers for PD	Sen. (Year)	n	x̄	s	p
I do not have the pre-requisites (e.g., qualifications, experience, seniority)	0-5	2,746	1.62	0.716	0.00
	6 +	12,456	1.45	0.690	
PD is too expensive	0-5	2,745	2.38	0.821	0.00
	6 +	12,451	2.28	0.853	
There is a lack of employer support	0-5	2,725	2.63	0.867	0.00
	6 +	12,398	2.54	0.897	
PD conflicts with my work schedule	0-5	2,728	2.60	0.848	0.00
	6 +	12,396	2.53	0.870	
I do not have time because of family responsibilities	0-5	2,744	2.12	0.884	0.00
	6 +	12,450	2.28	0.927	
There is no relevant PD offered	0-5	2,732	2.56	0.870	0.01
	6 +	12,430	2.51	0.870	
There are no incentives for participating in PD	0-5	2,743	2.80	0.889	0.10
	6 +	12,479	2.84	0.907	

Sen=Seniority.

According to Table 7, teachers' thoughts about the absence of incentives for participation in PD activities are similar and do not differ significantly (p>0.05). Senior teachers think that they cannot find time for PD because of their family

responsibilities, compared to junior teachers. In other barriers for PD, the perception of teachers with low seniority is higher. In other words, as seniority increases, the perception of not having prerequisites, the thought that PD is too expensive, lack of employer support, conflicts with work schedule and lack of relevant PD activity decrease.

Discussion

In the current study, teachers' participation in PD activities, PD needs and barriers for PD were examined in Turkey sample based on TALIS 2018 data. As a result of the research, it was found that teachers attended the courses and seminars individually. In-service training courses and seminars are organized by the Ministry of National Education and provincial directorates of national education for teachers in Turkey. Since participation in these courses is mandatory, it can be said that teachers participate in these activities at most. As a traditional PD practice, there is an intense criticism of in-service training in the literature. It is reported that such programs are inefficient, educational staff are not sufficient, that they are only for information transfer purposes and are not based on interaction (Uştu, Taş, & Sever, 2016; Yalçın İncik, & Akbay, 2018). In Turkey, in-service training is far from meeting the specific needs of schools or teachers. In-service training is usually conducted in the form of presentations and they are generally given to crowded teacher groups as a presentation. Furthermore, there are no effective support systems that allow teachers to participate in different PD practices. For this reason, in-service training is a preferred choice for teachers. In international comparison studies (Maya & Taştekin 2018; Özkan, Özkan, & Güvendir, 2019) of the highly successful countries in student achievement, PD activities are organized according to the needs of teachers, school and district. PD activities in these countries are mostly at local level and teachers are active in their professional practices. In a national study conducted by Bellibas and Gumus (2016), teachers believe that the quality of PD provided to teachers is less related to teaching practice. Researchers underlined that this situation may also be related to student achievement. Yirci (2017) stated that the most common activities performed by teachers for PD are reading books/journals, colleague assistance and using mass media. In addition, it was found that teachers attend trainings/seminars/ conferences and carry out academic studies.

The type of PD activities has different effects on teachers in gaining knowledge and skills and transferring this knowledge into practice in the classroom setting. In the study conducted by Kennedy (2016), in which he synthesized research results on the impact of teachers' PD on student achievement, it was reported that practices that lead teachers to think and practices that teachers actively participated in are more useful. In a similar study, Borko (2004) also found that practices that offer cooperation opportunities are more effective. Furthermore, the OECD (2019b) draws attention to activities that will be placed in daily practices rather than mandatory policies as the only way to participate in continuous PD.

As a result of the research, significant differences were found in PD activities that teachers attended in terms of seniority. Teachers with less years of seniority participate more in individual courses and seminars than teachers with more seniority. As a matter of fact, school visits, observations and trips to various institutions are organized within the scope of Candidate Teacher Training Program in Turkey. Therefore, organizing more PD activities for new teachers may have caused this differentiation. Senior teachers, on the other hand, prefer online courses/seminars more compared to teachers with low seniority. Horzum, Albayrak, and Ayvaz (2012) found that senior teachers have higher beliefs in in-service training activities given through distance education compared to new teachers. It can be said that senior teachers may prefer online courses on the grounds of work-family life balance. Additionally, as seniority increases, so does the habit of reading books for PD. Richter et al. (2011) associate senior teachers' reading habits with their being more self-oriented individuals. In a synthesis research conducted by Kyndt, Gijbels, Grosemans, and Donche (2016), seniority, career stage and age were found to be the precursors to participation in informal learning activities empirically. Richter et al. (2011) concluded that there is a negative relationship between participation in in-service trainings and seniority, and that informal learning activities showed different patterns throughout the teaching career. As a result, it can be concluded that the relationship between the seniority of teachers and the PD activities they participate in will be shaped by different trends in the country's PD policies, teaching/learning practices and career stages.

According to the results of the research, it can be said that teachers mostly need PD in communication with people from different cultures and countries, and teaching in multicultural and multilingual educational environments. Knowledge of the subject field, curriculum knowledge, school management and pedagogical competence are the areas where teachers need PD the least. From this perspective, it can be considered that teachers need development in a cultural context. The subjects of PD needs of teachers may change depending on economic, technological and social developments. In a study conducted by Özdemir (2013) on primary and secondary school teachers, teachers reported their needs as new teaching approaches, methods and techniques, subject field, use of instructional technologies, teaching students with special needs, recognition of student psychology, measurement and evaluation. There has been a significant increase in the number of refugees and migrants coming to Turkey, especially after the latest developments in the Middle East in recent years. Within the scope of inclusive education, the children of refugee and immigrant families receive education with other students. These developments increase the needs of teachers' multicultural educational skills.

When PD needs are examined according to seniority, it is observed that the perception of PD needs decreases as seniority increases. Candidate teachers are provided with theoretical knowledge in teacher education. However, teaching is a profession in which learning goes on continuously in practice. For this reason, teachers with high seniority increase their skills both through their experience in teaching practices and through the educational activities they participate in during

the process. Therefore, teachers with low seniority can be expected to feel more in need of PD. In the study conducted in the USA sample by Zhang, Shi, and Lin (2020), the new teachers need more PD than senior teachers in the fields of "knowledge and understanding of their subject field(s)", "pedagogical competencies in teaching their subject field(s)", "knowledge of curriculum", "knowledge of teaching for diversity (including: individualized learning, teaching students with special needs, teaching in a multicultural or multilingual setting, teaching cross-curricular skills, developing cross-occupational competences for future work or future studies)" and "student behavior and classroom management". On the other hand, senior teachers stated that they needed more assistance in the fields of "new technologies in work place", "information and communication technology skills for teaching" as well as "implementation of national/state curriculum standards or Common Core standards".

According to the teachers, the lack of any incentives for participation in PD activities is the first barrier. The barriers that have the least impact on teachers' participation in PD activities are family responsibilities, perceiving these activities as expensive and not having pre-requisites. From this point of view, it can be suggested that individual factors have the least impact on participation in PD activities. On the other hand, managerial factors such as the lack of employer support and incentives have the most impact. In TALIS-2008, factors such as teachers' family responsibilities, incompatibility with the work schedule and teachers' thinking that there is no PD activity suitable for them were seen as barriers for PD (Büyüköztürk, Akbaba Altun, & Yıldırım, 2010). Research findings on barriers for PD draw attention to time, support and resources (Can, 2019; Heystek & Terhoven, 2015). Appova and Arbaugh's (2018) study in America found that the lack of scholarship/resources, which are generally not available for teachers to follow their PD outside of contract hours, reduces teachers' learning motivations. According to Yirci (2017), the biggest barriers for PD of teachers are the bureaucratic structure and the factors arising from the teachers themselves. Economic reasons, lack of resources and materials are also barriers for PD.

In terms of seniority, the perception that family responsibilities hinder PD is higher among teachers with high seniority. PD is influenced by the obligation to balance work and family life (McIlveen et al., 2019). Senior teachers are more likely to experience the hardships such as work-family conflicts. Teachers with low and high seniority have similar perceptions about not being promoted to participate in PD activities. In all other fields, it can be said that new teachers have higher perceptions. In the research conducted by Zhang, Shi, and Lin (2020), new and senior teachers stated that barriers for PD are "There are no incentives for participating", "PD conflicts with my work schedule", "I do not have time because of family responsibilities"; they stated that "PD is too expensive/unaffordable", "Poor quality of PD", "There is no relevant PD offered", "There is a lack of employer support" and "I do not have the prerequisites". Senior teachers have higher averages than new teachers in the fields of "PD is too expensive/ unaffordable", "I do not have time because of family responsibilities" and "There are no incentives for participating". New teachers, on the other hand, have a higher average in the field of "I do not have the pre-requisites" compared to senior teachers.

Conclusions and Suggestions

The results of the research pointed out that the relevant policies are effective in the participation of teachers in different PD activities. Furthermore, it was determined that the needs of PD differed by seniority and type of school; the perception of barriers for PD differed by seniority and gender. In this context, the following suggestions have been made for the continuous PD of teachers:

Within the scope of PD, compulsory in-service training policies direct teachers to activities in this field. Such policies may limit the participation of teachers in mentoring, coaching, peer support and practice-oriented activities that are characterized as effective PD activities in the literature. Policies to support effective PD activities can be developed and such practices can be given place within school structures.

When planning PD activities, different types of PD options can be offered according to seniority and preferences.

The results of the research point out that changes in the social sphere can also lead to various teacher needs. Therefore, PD needs of teachers can be determined by considering the developments in different fields.

The PD needs of teachers differ according to seniority. Individual factors, school type and conditions can be taken into account while determining the needs.

The results point to the lack of resources, support and policy as barriers for PD. It can be suggested that policies, support structures and resources are needed to facilitate teachers' participation in PD activities. In this context, such policies can also be associated with incentive and reward systems, such as an increase in the career path of teachers.

Perceptions of teachers about the barriers of PD differ by seniority. Within the scope of PD, online activities, especially for senior teachers, can be included, and PD activities that can relate to their daily work schedule can be planned. The beginning teachers' perceptions of the barriers in different categories are high. For beginning teachers, the early years are important for PD. More flexible practices on workload can be implemented for PD over time.

References

Abu-Tineh, A. M., & Sadiq, H. M. (2018). Characteristics and Models of Effective Professional Development: The Case of School Teachers in Qatar. *Professional Development in Education*, *44*(2), 311-322.

Akyıldız, S., Yurtbakan, E., & Tok, R. (2019). The Evaluation of Primary School Teachers' of 2023's Education Vision Views on the Politics about Their Professional Development. *National Education Journal*, *48*(1), 827-852.

Appova, A., & Arbaugh, F. (2018). Teachers' Motivation to Learn: Implications for Supporting Professional Growth. *Professional Development in Education*, *44*(1), 5-21.

Atmaca, T. (2020). Examination of Professional Mistakes Made by Teachers in the Context of Vocational Learning. *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 6*(1), 309-326.

Avalos, B. (2011). Teacher Professional Development in Teaching and Teacher Education Over Ten Years. *Teaching and Teacher Education*, *27*(1), 10-20.

Bayar, A. (2014). The Components of Effective Professional Development Activities in Terms of Teachers' Perspective. *Online Submission*, 6(2), 319-327.

Bellibas, M. S., & Gumus, E. (2016). Teachers' Perceptions of the Quantity and Quality of Professional Development Activities in Turkey. *Cogent Education*, 3(1), 1-15.

Bellibas, M., Bulut, O., & Gedik, S. (2017). Investigating Professional Learning Communities in Turkish Schools: The Effects of Contextual Factors. *Professional Development in Education*, 43(3), 353-374.

Borko, H. (2004). Professional Development and Teacher Learning: Mapping the Terrain. *Educational Researcher*, 33(8), 3-15.

Buczynski, S., & Hansen, C. B. (2010). Impact of Professional Development on Teacher Practice: Uncovering Connections. *Teaching and Teacher Education*, 26(3), 599-607.

Büyüköztürk, Ş., Akbaba-Altun, S., & Yıldırım, K. (2010). *Uluslararası Öğretme Ve Öğrenme Araştırması* (Teaching and Learning International Survey). Türkiye Ulusal Raporu. Ankara: Millî Eğitim Bakanlığı Dış İlişkiler Genel Müdürlüğü.

Cameron, S., Mulholland, J., & Branson, C. (2013). Professional Learning in The Lives of Teachers: Towards A New Framework for Conceptualising Teacher Learning. *Asia-Pacific Journal of Teacher Education*, 41(4), 377-397.

Can, E. (2019). Professional Development of Teachers: Obstacles and Suggestions. *Journal of Qualitative Research in Education, 7*(4), 1618-1650.

Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad.* National Staff Development Council and the School Redesign Network at Stanford University.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective Teacher Professional Development.* Palo Alto, CA: Learning Policy Institute.

Desimone, L. M. (2009). Improving Impact Studies of Teachers' Professional Development: Toward Better Conceptualizations and Measures. *Educational Researcher*, 38(3), 181-199.

Desimone, L. M., Porter, A. C., Garet, M. S., Yoon, K. S., & Birman, B. F. (2002). Effects of Professional Development on Teachers' Instruction: Results from a Three-Year Longitudinal Study. *Educational Evaluation and Policy Analysis*, 24(2), 81-112.

Directorate General for Teacher Training and Improvement - DGTTI (2019). *Teachers' Professional Study Programs for September 2019*. DGTTI.

Gümüş, S. (2013). The Effects of Teacher-and School-Level Factors on Teachers Participation in Professional Development Activities: The Role of Principal Leadership. *Journal of International Education Research (JIER)*, 9(4), 371-380.

Guskey, T. R. (2002). Professional Development and Teacher Change. *Teachers and Teaching*, 8(3), 381-391.

Guskey, T. R. (2003). What Makes Professional Development Effective? *Phi Delta Kappan*, 84(10), 748-750.

Heystek, J., & Terhoven, R. (2015). Motivation as Critical Factor for Teacher Development in Contextually Challenging Underperforming Schools in South Africa. *Professional Development in Education*, 41(4), 624-639.

Hoekstra, A. (2007). *Experienced Teachers' Informal Learning in the Workplace*. IVLOS, Universiteit Utrecht.

Hoekstra, A., Korthagen, F., Brekelmans, M., Beijaard, D., & Imants, J. (2009). Experienced Teachers' Informal Workplace Learning and Perceptions of Workplace Conditions. *Journal of Workplace Learning*, 21(4), 276-298.

Horzum, M.B., Albayrak, E., & Ayvaz, A. (2012). Elementary Classroom Teachers' Beliefs on In-Service Training via Distance Education. *Ege Journal of Education*, 13(1), 56-72.

İlğan, A. (2017). *Öğretmenlerin Mesleki Gelişimi ve Denetimi* (Professional Development and Supervision of Teachers). 2nd Edition. Ankara: Anı Publishing.

Imants, J., & van Veen, K. (2010). Teacher Learning as Workplace Learning. In E. Baker, B. McGaw, & P. Peterson (eds.), *International Encyclopedia of Education* (pp. 569-574) 3rd Edition, part 7.

Kahyaoğlu, R. B., & Karataş, S. (2019). Teaching Opinions on Professional Development Education Seminars. *Pamukkale University Journal of Social Sciences Institute*, 37, 191-220.

Karasar, N. (2007). *Bilimsel Araştırma Yöntemi* (Scientific Research Method). 17th Edition. Ankara: Nobel Publications.

Kedzior, M., & Fifield, S. (2004). Teacher Professional Development. *Education Policy Brief, Education Research and Policy Centre, University of Delaware, 15, 1-6.*

Kennedy, M. M. (2016). How Does Professional Development Improve Teaching? *Review of Educational Research, 86*(4), 945–980.

King, F. (2016). Teacher Professional Development to Support Teacher Professional Learning: Systemic Factors from Irish Case Studies. *Teacher Development*, *20*(4), 574-594.

Kwakman, K. (2003). Factors Affecting Teachers' Participation in Professional Learning Activities. *Teaching and Teacher Education*, *19*(2), 149-170.

Kyndt, E., Gijbels, D., Grosemans, I., & Donche, V. (2016). Teachers' Everyday Professional Development: Mapping Informal Learning Activities, Antecedents, and Learning Outcomes. *Review of Educational Research*, *86*(4), 1111-1150.

Labone, E., & Long, J. (2016). Features of Effective Professional Learning: A Case Study of the Implementation of a System-Based Professional Learning Model. *Professional Development in Education*, *42*(1), 54-77.

Lecat, A., Beausaert, S., & Raemdonck, I. (2018). On the Relation Between Teachers' (in) Formal Learning and Innovative Working Behavior: The Mediating Role of Employability. *Vocations and Learning*, *11*(3), 529-554.

Maya, İ., & Taştekin, S. (2018). The Comparison Between Some Countries Having the Highest Achievement in PISA and Turkey in Terms of Teachers' Professional Development Practices. *Electronic Turkish Studies*, *13*(11), 909-932.

McIlveen, P., Perera, H. N., Baguley, M., van Rensburg, H., Ganguly, R., Jasman, A., et al. (2019). Impact of Teachers' Career Adaptability and Family on Professional Learning. *Asia-Pacific Journal of Teacher Education*, *47*(2), 103-117.

Ministry of National Education - MoNE (2017). Öğretmenlik Mesleği Genel Yeterlikleri (General Competencies for Teaching Profession). MoNE.

Önen, F., Mertoğlu, H., Saka, M., & Gürdal, A. (2009). The Effects of In-Service Training on Teachers' Knowledge about Teaching Methods and Techniques: Öpyep case. *Ahi Evran University Journal of Kırşehir Education Faculty*, *10*(3), 9-23.

Opfer, V. D., & Pedder, D. (2011). The Lost Promise of Teacher Professional Development in England. *European Journal of Teacher Education*, *34*(1), 3-24.

Organisation for Economic Co-operation and Development - OECD (2005). *Teachers Matter: Attracting, Developing and Retaining Effective Teachers, Education and Training Policy.* OECD Publishing.

Organisation for Economic Co-operation and Development - OECD (2009). *Creating Effective Teaching and Learning Environments*: *First Results from TALIS.* OECD Publishing.

Organisation for Economic Co-operation and Development - OECD (2019a). *TALIS 2018 results (Volume I): Teachers and School Leaders as Lifelong Learners*. OECD Publishing.

Organisation for Economic Co-operation and Development - OECD (2019b). *Education at a Glance 2019*. OECD Publishing.

Özdemir, S. M. (2013). Exploring the Turkish Teachers' Professional Development Experiences and their Needs for Professional Development. *Mevlana International Journal of Education, 3*(4), 250-264.

Özdemir, S. M. (2016). Continuous Professional Development as an Indicator of Teacher Quality. *Gazi Journal of Education Science, 2*(3), 233-244.

Özer, Ö., & Anıl, D. (2014). Öğretmen Mesleki Gelişim Değişkenlerinin Ayırt Edicilik Düzeyi (Discrimination Level of Teacher Professional Development Variables). *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 29*(4), 205-216.

Özkan, M., Özkan, Y. Ö., & Güvendir, M. A. (2019). Investigation of Turkey and Singapore Schools in Terms of Teacher Professional Development and Teacher Behaviors Hindering Learning Variables. *Education and Science*, *44*(198), 309-325.

Petrie, K., & McGee, C. (2012). Teacher Professional Development: Who Is the Learner? *Australian Journal of Teacher Education*, *37*(2), 59-72.

Richter, D., Kunter, M., Klusmann, U., Lüdtke, O., & Baumert, J. (2011). Professional Development across the Teaching Career: Teachers' Uptake of Formal and Informal Learning Opportunities. *Teaching and Teacher Education*, *27*(1), 116-126.

Shoshani, A., & Eldor, L. (2016). The Informal Learning of Teachers: Learning Climate, Job Satisfaction and Teachers' and Students' Motivation and Well-Being. *International Journal of Educational Research*, *79*(2016), 52-63.

Sıcak, A., & Parmaksız, R. Ş. (2016). An Evaluation of Efficacy of In-Service Training in Primary Schools. *The Inonu University Journal of the Faculty of Education, 17*(1), 17-33.

TEDMEM (2019). *TALIS 2018 Sonuçları Ve Türkiye Üzerine Değerlendirmeler* (TALIS 2018 Results and Evaluations on Turkey). Ankara: Türk Eğitim Derneği Yayınları.

Türker, Y., & Tok, T. N. (2019). Metaphoric Beliefs of Teachers about Occupational Practices. *Journal of Theoretical Educational Science, 12*(1), 274-297.

Uçar, R., & İpek, C. (2006). The Views of Primary Schools Administrators and Teachers About In-Service Training Programs In The Turkish Educational System. *Yüzüncü Yıl University Journal of Education Faculty*, *3*(1), 34-53.

Uştu, H., Taş, A. M., & Sever, B. (2016). A Qualitative Study about the Perceptions of Teachers on Professional Development. *Electronic Journal of Occupational Improvement and Research*, *4*(1), 15-23.

Vermunt, J. D., & Endedijk, M. D. (2011). Patterns in Teacher Learning in Different Phases of the Professional Career. *Learning and Individual Differences*, *21*(3), 294-302.

Yalçın İncik, E., & Akbay, S. E. (2018). Ortaöğretim Öğretmenlerine Yönelik Bir Çalışma: Mesleki Gelişim Faaliyetlerine Yönelik Tutumları ve Eğitim Ihtiyaçları (A Study for Secondary School Teachers: Their Attitudes towards Professional Development Activities and Education Needs). *Electronic Turkish Studies*, *13*(27), 1653-1676.

Yirci, R. (2017). Barriers to Teacher Professionalism and Suggestions for Solution. *Ahi Evran University Journal of Kırşehir Education Faculty, 18*(1), 503-522.

Zhang, S., Shi, Q., & Lin, E. (2020). Professional Development Needs, Support, and Barriers: TALIS US New and Veteran Teachers' Perspectives. *Professional Development in Education*, *46*(3), 440-453.