FACTORS AFFECTING TEACHERS' PARTICIPATION IN PROFESSIONAL DEVELOPMENT ACTIVITIES IN TURKEY

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by

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The undersigned, appointed by the Dean of the Graduate School, have examined the dissertation entitled

FACTORS AFFECTING TEACHERS' PARTICIPATION IN PROFESSIONAL DEVELOPMENT ACTIVITIES IN TURKEY

Presented by Adem Bayar,

A candidate for the degree of Doctor of Philosophy,

And hereby certify that, in their opinion, it is worthy of acceptance.

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…… To My Family

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ABSTRACT

FACTORS AFFECTING TEACHERS' PARTICIPATION IN PROFESSIONAL DEVELOPMENT ACTIVITIES IN TURKEY

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Dr. Peggy Placier, Dissertation Advisor

The purpose of this study was to examine the relationship between factors (internal [personal] and external [environmental]) and teachers' participation in professional development (PD) programs in Turkey.

The researcher employed a survey design, using a multiple-stage sampling method, selecting 30 out of 66 elementary schools in the Center district of Osmaniye, Turkey. All teachers present on the day of the survey administration were invited to participate in the study. The total number of returned, usable surveys was 525 out of 600 total questionnaires.

After analyzing the collected data using Poisson regression, the researcher found that although age, teachers' attitudes towards PD activities, time, funding, and colleague influence affect teachers' participation in PD activities in statistically significant ways; gender, teaching experience, grade level of teaching, education level, teachers' self-efficacy, principal, and school culture do not affect their participation in these activities in Turkey.

CHAPTER I - INTRODUCTION

Background of the Problem

Schooling involves key stakeholders, such as school administrators (principals), teachers, students, teacher organizations, professional developers, parents and community members; each maintaining an equally important role in providing high quality education to students (McLaughlin & Talbert, 2006). However, the teacher holds a special importance in this process, not only for the implementation of the curriculum in the classroom (Visser, Coenders, Terlouw, & Pieters, 2010), but also for the accountability for student achievement (Borko, 2004; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Seferoglu, 2007). Senge (1990) has emphasized the vital role of teachers when implementing new policies and practices in the classroom. Similarly, Cheng (1996) has also asserted that having high quality teachers is important to the enhancement of quality education. Guskey (1994) has stressed the importance of the teacher in schools stating, "We cannot improve schools without improving the skills and abilities of the teachers within them" (p. 9).

The responsibilities of teachers have dramatically changed and increased over the last several decades (Hargreaves, 1992; Lohman & Woolf, 2001). As indicated by Campbell, McNamara, and Gilroy (2004), teachers are responsible for maintaining high quality standards and increasing the achievement of students. Several recent studies have also illustrated that the achievement of students is highly correlated to the quality of teachers (Collinson & Cook, 2000; Fallon, 1999; Colbert, Brown, Choi, & Thomas, 2008;

Meister, 2010; Opfer & Pedder, 2011). The exact impact of teacher quality on student learning and achievement has been debated over the past several decades by many educators, researchers, policy makers, and teacher unions. In response to this ongoing discussion, a variety of studies have shown there to be a positive relationship between the quality of the teacher and the achievement of students (Abbate-Vaughn & Paugh, 2009; Ascher & Fruchter, 2001; Borman & Kimball, 2005; Boyle, While, & Boyle, 2004; Demirtas, 2010; Hodge & Krumm, 2009; Guskey, 2002; Kanli & Yagbasan, 2002; Mahon, 2003; Okoye, Momoh, Aigbomian, & Okecha, 2008; Orhan & Akkoyonlu, 1999; Palardy & Rumberger, 2008; Pedder, James, & MacBeath, 2005; Peske & Haycock, 2006; Rockoff, 2004; Seferoglu, 2001; Ucar & Ipek, 2006; Vogt & Rogalla, 2009). However, Hirsh (2001) has claimed that most students lack quality teachers. As is evidenced by certain studies, many teachers are not adequately prepared to teach when they graduate from university (Ozer, 2004; Palardy & Rumberger; 2008; Porter & Brophy, 1988; Seferoglu, 2001). While pre-service training programs are important, in-service training programs are just as important for teachers (Oral & Saglam, 2010; Seferoglu, 2007). When teachers are not well prepared in pre-service training programs, in-service training programs, especially professional development (PD) activities, are vital for improving their proficiency in teaching (Demirtas, 2010). The report of the National Commission on Teaching and America's Future (1996) is consistent with the findings in the above-mentioned studies. According to this report, almost a quarter of secondary school teachers need additional training due to lack adequate preparation in the subject area in which they teach.

Current educational reform requires teachers to improve their classroom practice. For instance, in the United States (US), "No Child Left Behind" (NCLB) requires schools to show annual progress; initiatives to improve student performance must be validated by scientific research. To reach this aim, NCLB calls for highly qualified teachers in all academic areas and all grade levels (Mahon, 2003). One way to increase the quality of teachers is to provide PD activities to them (Sandholtz & Scribner, 2006; Seferoglu, 2007; Ozer, 2004; Ozer & Beycioglu, 2010).

According to a considerable amount of the literature, there seems to be a broad agreement among researchers and educators indicating that the teacher quality impacts student learning and achievement. As a result, teacher professional development is paramount to an effective educational system. In the following section, the researcher discussed the statement problem of this study.

Statement of the Problem

The preparation of well-educated people is a key component for any society engaged in global competition. To this end, the development of high quality teachers is one of the central components in the educational process (Borko, 2004; Seferoglu, 2007). The practice of PD both helps teachers to develop their skills as well as to facilitate the development of new ones. PD programs play a key role in preparing all teachers to do their jobs better (Birman, Desimone, Porter, & Garet, 2000). Borko (2004) has indicated that, "Teachers' professional development is essential to efforts to improve our schools" (p. 3). Many studies have clearly shown that activities of high-quality PD within and beyond the school affect teachers positively (Boydak & Dikici, 2001; Carver & Katz,

2004; Desimone, Porter, Garet, Yoon, & Birman, 2002; Jonson, 2002; McLaughlin & Talbert, 2006; Moir & Gless, 2001).

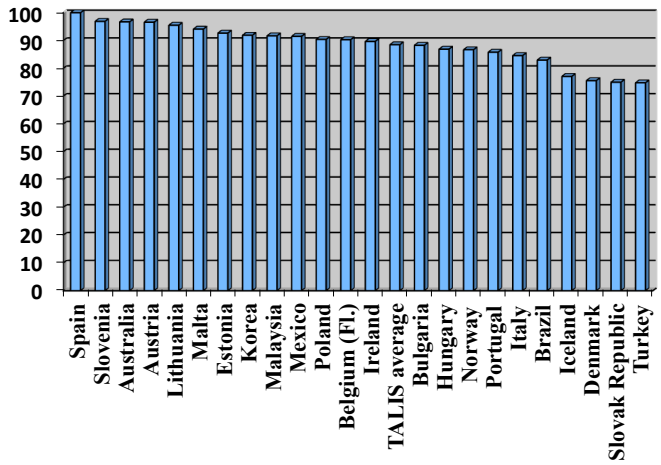
As more and more PD research has been conducted in the US, there has been an increased interest in this phenomenon in other nations. Since the beginning of the 1960s, Turkey has recognized the importance of PD activities for the development of the workforce not only in education but also in other industries. Thus, some research on PD has come out of Turkey (Ozturk & Sancak, 2007; Selimoğlu & Yılmaz, 2009). However, the value of PD for teachers began to be called into question at the turn of the century (Saban, 2000). As a result, the number of studies related to the PD of teachers has dramatically increased among Turkish scholars. However, the current focus in Turkish literature is generally on the importance and necessity of PD activities for teachers (Aytac, 2000; Bayindir, 2009; Boydak & Dikici, 2001; Ozturk & Sancak, 2007; Saban, 2000; Seferoglu, 2007; Selimoğlu & Yılmaz, 2009); which in turn leaves various aspects of PD activities largely unexplored. The problem to be examined in this study is explanation for the relatively low level of teacher participation in PD activities in Turkey.

In 2009, the Organization for Economic Co-operation and Development (OECD) conducted the Teaching and Learning International Survey (TALIS). The survey explored teaching and learning at the international level and was administered to lower secondary education teachers. The data were collected through paper and online questionnaires from 20 teachers from each of 200 schools across 23 countries. Participant countries included: Australia, Austria, Belgium (Fl.), Brazil, Bulgaria, Denmark, Estonia, Hungary, Ireland, Iceland, Italy, Korea, Lithuania, Mexico, Malta, Malaysia, the Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, and Turkey.

According to the TALIS (2009), the main focus of the project was to provide robust international indicators and policy-relevant analyses of teachers and teaching for the purpose of helping these countries to review and develop policies that create the conditions for effective schooling.

The results of the TALIS (see Figure 1) reflected that teachers' rate of participation in PD activities in the 23 participating countries was 89% on average within the 18 months prior to the survey. However, the participation rate of Turkish teachers in PD activities was 74.8% (TALIS, 2009). In fact, the participation rate of Turkish teachers in PD was the lowest among all participating countries, even though according to Ministry of National Education (MONE) policies, teacher participation is mandatory. Unfortunately, due to the lifelong job status of teachers in Turkey, failure to participate in PD activities may lack any real consequences. The TALIS also reported that while Turkish lower secondary teachers spent an average of 11.2 days on PD, their contemporaries in the other participating countries averaged around 15.3 days for their PD across the same 18-month period. Hence, I identified a need for further research into factors that influence teachers' participation in PD activities.

Figure 1.1. Percentage of Teachers Who Undertook Some Professional Development within the Previous 18 months (2007-08)



Source of data: OECD 2009; www.oecd.org

Purpose of the Study

The purpose of this study is to examine the relationship between factors (internal [personal] and external [environmental]) and teachers' participation in PD programs in Turkey. The findings of this study will be used to inform policy makers in Turkey regarding methods for increasing teacher participation rates in PD programs.

Design of the Study

The researcher plans to employ a survey research design for this study. The survey was developed by the researcher after a review of existing literature regarding barriers and motivations to participation in PD programs. The researcher aims to measure the relationship between independent (internal and external factors) and dependent (teachers' participation in PD activities) variables, which are based on data collected from a sample.

600 elementary school teachers were invited to complete a teacher questionnaire. Due to normal variations attributable to issues with sample choosing not to participate,

the researcher hoped to work with a minimum of 400 elementary school teachers. Due to the inability to directly contact teachers, the researcher randomly selected 30 elementary schools (30 out of 66) from the center district of Osmaniye, Turkey and administered the survey with the elementary school teachers from those 30 elementary schools.

Because of limitations due to response rate and cost concerns, the researcher initially planned to combine "a group administered survey" and "Internet survey" and employ this combination in this study to collect data. Since, the researcher believed that the advantages of group administered and Internet survey methods address each others' disadvantages. However, after completing the pilot study, based on the participants' feedback the researcher changed his mind and opted to just use "group administrated survey" for the major data collection procedure.

The researcher personally visited each participating school and individually administered the survey. As a result, the data was collected via "group administration" survey technique in the school settings.

Upon completion of data collection, the researcher interpreted the data by running Poisson regression analyses using SPSS software and reported the results of the study.

Research Questions

In conducting this study, the researcher tested how both internal (personal) and external (environmental) factors affect teachers' participation in PD activities. This research, therefore, addressed the following questions:

1. How does elementary school teachers' participation in PD activities differ according to their personal characteristics?

2. What are the internal factors associated with teacher participation in PD activities? For example, how do teachers' attitudes toward professional development activities and self-efficacy influence their participation in PD activities?
3. What are the external factors associated with teacher participation in PD activities? For instance, how do time, funding, principal influence, colleague influence, and school culture impact the participation of teachers in PD activities?

Rationale for the Choice of Topic

The researcher's interest in teacher education, particularly teachers' professional development, stems from the researcher's prior professional and personal experiences. Professionally, before beginning his doctoral studies at the University of Missouri - Columbia, the researcher received his master's degree in Educational Science with a focus in Curriculum and Instruction in Turkey; at which time, he wrote his thesis on teaching and assessment. Upon receiving his master's degree, the researcher was afforded many opportunities to speak with teachers and principals. Through these conversations, the researcher began recognizing the true importance of PD activities as a vehicle for teacher development. Upon starting his doctoral program at the University of Missouri, the researcher had the opportunity to communicate with renowned professors in the field of educational science in Turkey, who emphasized to him the need for researching PD in Turkey in an attempt to address various issues endemic to the Turkish educational system.

In addition to learning more about the PD of teachers in Turkey via his professional experiences, the researcher also personally worked as both a teacher and a

principal in several primary schools over a 4-year period prior to coming to the United States in June of 2008. While working as a principal and classroom teacher in Turkey from 2004 to 2008, the researcher both participated in PD activities and witnessed the resistance of fellow teachers to participation in PD programs. Consequently, the above mentioned professional and personal experiences encouraged the researcher to further study the factors related to the decision of teachers to participate in PD activities as a focus of his doctoral dissertation.

Theoretical Framework of the Study

The theoretical framework for this study has been constructed by synthesizing Fishbein and Ajzen's Theory of Reasoned Action (1975), Rubenson's Recruitment Paradigm (1977), and Darkenwald and Merriam's Psychosocial Interaction Model (1982), in combination with previous studies of teacher participation in PD and knowledge of PD policies and practices in Turkey. As a result of the study, the researcher hopes to develop an "Individual Participation in PD Model" that explains teacher participation in PD in Turkey. According to the three theoretical models mentioned above, internal factors such as teachers' attitudes toward professional development activities and self-efficacy and external factors such as time, funding, the impact of principal, colleague influence, and school culture may affect teachers' participation in PD activities. Studies reviewed in Chapter 2 further suggest that personal characteristics of teachers are related to their participation. Finally, conditions of PD for teachers in Turkey differ from those in the U.S., where most PD research has taken place. Therefore, the survey items must be adapted to those conditions.

The Importance of Study

Over the past several decades, PD of teachers has been of central concern not only in Turkey, but across countries throughout the world (Seferoglu, 2007), due in no small part to the very real impact teachers have on the learning of students (Guskey, 2002; McLaughlin & Talbert, 2006). Hence, exploring ways to improve the quality of teachers via PD activities has become a key focus (Sandholtz & Scribner, 2006).

Even though there have been numerous studies conducted to examine factors influencing teachers' participation in PD activities in the US, there remains a dearth of information related to these factors in the Turkish literature. Therefore, by conducting this study, the researcher explores internal and external factors that may impact teachers' participation in PD programs in Turkey. Through this exploratory process, the study contributes to the literature, especially in Turkey, and encourages other researchers to conduct further studies related to the PD of teachers.

The results of this study also provide Turkish policy makers with a better understanding of the factors that affect teachers' participation in PD programs. This knowledge can in turn inform the development of strategies for increasing the participation rate of teachers in these activities, potentially positively impacting the achievement of Turkish students.

Limitations of the Study

This study has the following limitations:

1. The research sample was restricted to elementary school teachers, teaching grades one through eight, in elementary schools located within the center district of Osmaniye, Turkey.

2. Teachers may believe that responding positively to questions about PD would be more socially desirable.
3. On the other hand, teachers' responses might be negatively influenced due to compulsory PD legislation in Turkey.
4. The questionnaire items and questions might contain content and/or terms that are unfamiliar to the respondents. Every effort was made to adapt the questionnaire content to the cultural context in which the teachers work.
5. The participants in this study were Turkish teachers. Therefore, the questionnaire developed for this study required translation from English to Turkish. Due to cultural differences between the two languages, some points may be lost during this process. However, the researcher attempted to minimize the latter limitation by using back-translation before administration.

While the results of this study might be affected by the above limitations, there will still be a heuristic value to:

a. Researchers who are currently working on PD activities;
b. Policy makers who plan PD activities for teachers.

Assumptions of the Study

The following assumption was made in planning and conducting the study: the elementary school teachers completing the survey honestly and truthfully represented their viewpoints on the questionnaire.

Definition of Terms

The following is a list of term that has been used throughout the study:

1. **Teaching and Learning International Survey (TALIS)**: This was "the first international survey to focus on the working conditions of teachers and the learning environment in schools. Its aim was to help countries to review and develop policies that foster the conditions for effective schooling" (TALIS, 2009, p. 18).
2. **Professional Development:** Any formal training organized by the government for a determined time and place in order to update and/or improve teachers' content and pedagogical content knowledge.
3. **Elementary School:** A period of formal education starting after pre-school and continuing until high school. Elementary school in Turkey usually includes grades 1-8 during which time students learn basic skills about reading, writing, mathematics, and social studies.
4. **Elementary School Teachers:** Teachers of children from 1st to 8th grades in public or private schools in Turkey. They instruct students in a variety of subjects such as reading, writing, and mathematics. They also aim to develop the social skills and positive learning habits that students will need to be successful across their lifetime.

Summary

There is a general agreement among researchers and educators in the field of teacher education and professional development that the quality of the teacher affects students' learning and achievement (Guskey, 2002; McLaughlin & Talbert, 2006). Therefore, teacher quality has been of central concern for several decades, and a drive to understand the necessity and importance of PD activities has been adopted by countries

throughout the world (Seferoglu, 2007). In the past decade, Turkey has recognized this reality and has since begun investing in the development of their teachers (Saban, 2000). While there have been many attempts to improve teacher quality thus far, the research on PD activities is still limited. For instance, although recent researchers have emphasized the importance and necessity of PD activities for teachers in Turkey (Aytac, 2000; Bayindir, 2009; Boydak & Dikici, 2001), there are few studies related to the factors affecting teachers' participation in PD programs. Additionally, the results of the TALIS (see Figure 1) indicate the participation rate of Turkish teachers in PD activities lags behind other countries worldwide. In order to examine and better understand the relationship between the factors (internal and external) and teachers' participation in PD programs, the researcher conducted this quantitative study. In doing so, the researcher personally believes that he will be able to contribute to the literature, especially in Turkey, regarding the PD of teachers. In addition, the researcher believes that the results of this study will be able to inform policy makers, who provide PD activities to teachers, about ways to increase the participation rates of teachers in PD programs.

Organization of the Remaining Chapters

This chapter has introduced the proposed study and provided a framework to the readers. Chapter two will review existing literature on the PD of teachers and chapter three will explore the study's methodology and design. Chapter four will explore the research findings. Chapter five will address the discussion and conclusion of findings.

CHAPTER II - LITERATURE REVIEW

Purpose and Organization of the Literature Review

The purpose of this literature review is to investigate factors that affect teachers' participation in PD activities. After developing a definition of PD and discussing reasons for the international growth of PD activities for teachers, the researcher will discuss several theories of participative behavior applicable to the study of participation in PD. Then the researcher will review research on factors that affect the decisions of teachers to participate in PD activities and commonly used participatory behavior theories. Next, the researcher will discuss PD programs for teachers in Turkey in relation to policies of compulsory PD and life-long jobs. Finally, the researcher will end the chapter with a conceptual framework for "Individuals' Participation in PD" based on theory and research as well as knowledge about the conditions of teacher participation in Turkey.

Definition of Professional Development

According to Lowden (2005), "Much of the literature and research states that the goal of professional development is to provide opportunities for teachers to learn and grow within the profession, thereby making an impact on student learning"(p.8). Similarly, Payne and Wolfson (2000) have asserted, "The purpose of professional development is to provide teachers with the knowledge and skills to improve student achievement" (p. 14). According to Bredeson (2002):

> The purpose of professional development is to strengthen individual and collective practice. This purpose is anchored in the belief that the investment of huge sums of money, billions annually in the United States

and Europe, will contribute to enhanced professional practice leading to improved student learning outcomes (p. 663).

What all of these purpose statements have in common is that teacher learning, through professional development, is meant to improve academic outcomes for students.

However, professional development takes many forms, and definitions of PD are very broad; they extend to encompass any activities that achieve the above purpose. For example, Thomas Guskey, a noted author and researcher in professional development, defines PD as, "Those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might in turn improve the training of students" (Guskey, 2000, p.17). Torff and Sessions (2008) have explained that, "…PD initiative refers to a program of activities designed to enhance the professional knowledge of groups of teachers. The terms professional development, staff development, and teacher training are often used to describe such activities" (p. 124). Additionally, Ducheny, Allezhauser, Crandell, and Schneider (1997) have described PD as, "An ongoing process through which an individual derives a cohesive sense of professional identity by integrating the broad based knowledge, skills, and attitudes within psychology with one's values and interests" (p. 89). The National Staff Development Council (2001) definition states that, "Staff development is the means by which educators acquire or enhance the knowledge, skills, attitudes, and beliefs necessary to create high levels of learning for all students" (p. 2). The Teaching and Learning International Survey (TALIS) (2009) has defined professional development as "activities that develop an individual's skills, knowledge, expertise and other characteristics as a

teacher" (p. 49). Elman, Illfelder-Kaye and Robiner (2005) have identified that "… PD is the developmental process of acquiring, expanding, refining, and sustaining knowledge, proficiency, skill, and qualifications for competent professional functioning that result in professionalism" (p. 369). Overall, educational experts and researchers define professional development as an ongoing process developed to improve teacher abilities - specifically their professional knowledge, skills and attitudes - in the hopes of improving student achievement.

While the above definitions encompass literally any process of teacher learning, for the purpose of this study, the researcher defines professional development *as any formal training organized by the government for a determined time and place in order to update and/or improve teachers' content and pedagogical content knowledge*.

Growth of Professional Development

Over the past few decades there has been a decided growth in the area of professional development. Two main reasons have led to this change. First, the school reform movement has placed increasing demands on schools and teachers to be more accountable to the needs of students. Second, as has been the case across many professions, an increased demand for regular, continuing education for teachers has arisen. PD addresses these concerns in four key ways: (1) through updating and enhancing the teaching skills and pedagogical content knowledge of all teachers; (2) through filling the gap often left by inadequate teacher preparation programs; (3) through providing an accountability mechanism for the school reform movement; and (4) through seeking to improve the education of students and addressing their achievement gaps.

To continue to hone their skills, teachers must regularly engage in continuing education. PD activities are geared to help them on their professional journey as life-long learners and reflective practitioners (Birman, Desimone, Porter, & Garet, 2000; Dall'Alba & Sandberg, 2006; Hargreaves, 1994; Harland & Kinder, 1997; Hirsh, 2001; Rogers et al., 2007; Starkey et al., 2009; Ozer & Beycioglu, 2010).

PD activities can seek to remedy the deficit left behind from inadequate preservice training, enabling teachers to learn skills necessary to be effective on the job. For instance, Little (1989) has explained that, "Over the last two decades, professional development has become a growth industry. Local and state policy makers have been persuaded that preservice teacher education cannot fully satisfy the requirements for a well-prepared work force… " (p. 165).

PD activities allow school reform activists a mechanism for accountability; allowing them to point to efforts made by teachers (and ultimately schools and districts) that are geared toward meeting the needs of their stakeholders (Borko, 2004; Sparks & Loucks-Horsley, 1989).

Finally, PD activities provide a forum for dialogue about ways to improve the educational system and ultimately improve overall student achievement, allowing students to close the achievement gap and compete on a global scale (Fishman et al., 2003; Kwakman, 2001; Lowden, 2005; Payne & Wolfson, 2000; Supovitz & Turner, 2000; Sykes, 1996).

For all of these reasons, issues related to teacher PD have become a central concern for educational policy and research. Many countries around the world intend to increase the quality of teachers by offering various PD activities in their educational

systems. Thus, they have begun investing in and encouraging their teachers to participate in more PD activities. For instance, Torff and Sessions (2008) have reported that many states in the US no longer provide teachers with lifetime certifications. Instead, as a means for continued certification, they require teachers to participate in career-long PD. Similarly, the United Kingdom (UK) has recognized the importance of PD to teacher development and as a result has begun providing rich resources for this cause (McCaughtry, Martin, Kulinna, & Cothran, 2006). Boyle et al. (2004) have concurred with this reality and added that the British government focuses on the achievement of students, which in turn is dependent upon the quality of teaching, directly impacted by teacher participation in PD activities. Additionally, New Zealand, Netherlands, and Turkey recognize the importance of professional development activities for teachers. As a result these countries have made educational reforms; included among them are provisions for, and in some cases requirements of, professional development activities for their teachers (Starkey et al., 2009; Visser et al., 2010; www.meb.gov.tr). The above-mentioned examples clearly illustrate that a focus on teacher PD is part of the educational agenda for many countries wanting to maintain a workforce of highly qualified teachers worldwide. Consequently, as stated by Rogers et al. (2007), the PD of teachers will continue to play a critical role in teaching for a long time.

Theories Explaining Participation in Professional Development

To ground the study in theories related to participation in PD, the researcher examined several theories commonly used to explain adults' participative behavior.

1. The Theory of Reasoned Action (Fishbein & Ajzen, 1975)

The literature indicates that the theoretical models for adult participation in continuing professional education primarily focus on either psychological or sociological perspectives (Courtney, 1992). However, Fishbein and Ajzen's *Theory of Reasoned Action* employs psychological and sociological factors together and emphasizes the importance of individual factors and societal factors for participation decisions in learning activities (Becker & Gibson, 1998). The theory of reasoned action has been widely tested in empirical studies with varied populations and fields from education to health. For instance, this theory has been applied in workplace training (Fishbein & Stasson, 1990), with high school dropouts (Prestholdt & Fisher, 1983), to respiratory care practitioners' regarding participation intentions for completing a baccalaureate degree (Becker & Gibson, 1998), to leisure choices (Ajzen & Driver, 1992), and recreational behavior (Young & Kent, 1985), etc. A study by Becker and Gibson (1998) indicated that the *Theory of Reasoned Action* is appropriate in order to predict participation intentions in continuing professional education. National Center for Education Statistics (1998) has argued, "That people think about the implications of their actions before engaging in a behavior" (p. 17).

This theory assumes that an individual performs according to his or her intentions and that the intentions are shaped according to two determinants: personal attitudes and social pressures (Fishbein & Ajzen, 1975). McCamey (2003) has said, "The theory of reasoned action (Fishbein & Ajzen, 1975) proposes that both the individual and the desires of others are important to the individual and play a part in motivating individuals" (p. 7). To sum up, the *Theory of Reasoned Action* hypothesizes that, "Individuals will

intend to perform a behavior when they evaluate it positively and when they believe that important others will think they should perform it" (Ajzen & Fishbein, 1980, p. 6).

2. Recruitment Paradigm (Rubenson, 1977)

Rubenson's *Recruitment Paradigm* is a cognitive approach that focuses on the perceptual elements of an individual's life. This theory is occasionally named as an expectancy-value approach (National Center for Education Statistics, 1998). According to Collins (2011), "It focuses on the adult learner's perceived value of the learning activity (valence) and the likelihood of being able to participate and benefit from the learning activity" (p. 17). In this theory, the interactions of a variety of personal and environmental variables influence participation of adults. According to this theory, the personal variables included are: previous experience, personal attributes, and needs. Environmental variables are: a hierarchical structure, norms and values of significant others, and available educational possibilities (Rubenson, 1977).

3. Darkenwald and Merriam's Psychosocial Interaction Model (1982)

This theory posits that the participation of adults depends upon internal and external incentives. According to this theory, socioeconomic status factors are the most powerful determinants for adult participatory behavior (National Center for Education Statistics, 1998). This model also identifies the concept of learning press, which indicates that an individual's environment requires or encourages further learning. In addition, Wikelund, Reder, and Hart-Landsberg (1992) have emphasized the importance of what is known as learning press. National Center for Education Statistics, (1998) has said, "A

person's learning press fosters certain attitudes and perceptions about the value and utility of adult education" (p.38).

Darkenwald and Merriam (1982) have indicated four types of barriers that affect individual participation in any learning activities: 1) situational, 2) institutional, 3) psychosocial, and 4) informational barriers. Darkenwald and others built the Deterrents to Participation Scale (DPS-G). This scale identifies six general factors: 1) lack of confidence, 2) lack of course relevancy, 3) time constraints, 4) low personal priority, 5) cost, and 6) personal and family (National Center for Education Statistics, 1998).

As a next step toward constructing a conceptual framework for the study, the researcher reviewed the extensive research on teacher participation in professional development. This research identifies factors that fit within one or more of the above theories; for example, teachers' attitudes toward professional development activities (The Theory of Reasoned Action), time (Psychosocial Interaction Model), funding (Psychosocial Interaction Model), principal influence (Recruitment Paradigm, The Theory of Reasoned Action), colleague influence (Recruitment Paradigm, The Theory of Reasoned Action), and school culture (Recruitment Paradigm, The Theory of Reasoned Action).

Research on Factors Affecting Teacher Participation in Professional Development

Given the high investment in PD, it is important to examine the research that supports the above positive claims, findings for PD and the belief in its efficacy. In this regard, a number of studies have clearly shown that PD activities within and beyond the school affect teachers positively (Boydak & Dikici, 2001; Carver & Katz, 2004; Desimone et al., 2002; Easton, 2008; Jonson, 2002; McCaughtry et al., 2006;

McLaughlin & Talbert, 2006; Moir & Gless, 2001). The purpose of this study, however, is not to examine the effects of PD, but to discover factors that influence teacher participation in professional development activities in Turkey. If teachers do not participate, they obviously will not gain any benefits that PD might provide. This section, therefore, is limited to a review of the literature on teacher participation.

As can be seen in Figure 2. 1, various studies find that certain factors affect the participation of teachers in PD activities (Collinson & Cook, 2004; Easton, 2008; Hodkinson & Hodkinson, 2005; Lohman, 2006; McLaughlin & Talbert, 2006; Meister, 2010; Opfer & Pedder, 2011; Ozer & Beycioglu, 2010; Postholm, 2011; Visser et al., 2010; Yamagata-Lynch & Haudenschild, 2009). These seven (7) factors can be organized into two groups: internal (personal) and external (environmental) factors. They appear most frequently in the literature and are therefore deemed the major internal and external factors impacting formal PD activities. The internal (personal) factors include: (1) teachers' attitudes toward professional development activities and (2) teachers' self-efficacy. The external (environmental) factors include: (1) time, (2) funding (i.e. supplementary salary), (3) principal influence, (4) colleague influence, and 5) school culture (Bayindir, 2009; Boyle et al., 2004; Fullan, 1995; Lieberman; 1995; Meister, 2010; Miller, 1998; Opfer & Pedder, 2011; Ozer & Beycioglu, 2010; Postholm, 2011; Starkey et al., 2009; Torff & Session, 2008; Yamagata-Lynch & Haudenschild, 2009).

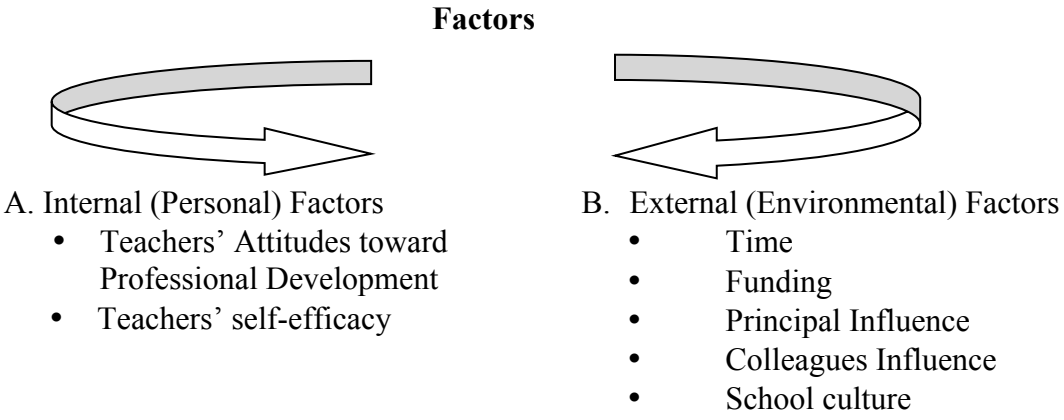


Figure 2.1. Factors Affecting Teachers' Participation in PD

In addition to these factors, some research has identified a third set of factors, personal characteristics of teachers, as important in participation. In the following sections, the researcher will synthesize the research on all three of these areas.

1. Internal Factors

A common belief among PD researchers is that internal factors affect teachers' participation in PD activities. These include: teachers' attitudes toward professional development activities and teachers' self-efficacy.

a. Teachers Attitudes toward Professional Development

Each teacher has his or her own attitudes about PD activities. Therefore, PD activities have both positive and negative implications for different teachers (McLaughlin & Talbert, 2006; Yamagata-Lynch & Haudenschild, 2009). While a PD program might work well for some teachers, the same activity might fail others. In this regard, the importance of teacher attitudes toward PD activities has been supported by researchers (Torff & Session, 2008; Torff & Session, 2009). In order to show the importance of

teachers' attitudes toward PD activities, Amos and Benton (1988) conducted a study and found that negative teacher attitudes towards PD affect their participation in PD activities. Additionally, Silane Ruberto (2003) tested the attitudes of teachers toward PD activities and ascertained: 1) there were no differences between veteran teachers and novice teachers regarding their attitudes toward PD activities, 2) when offered PD activities that were useful and related to their content area, teachers maintained their positive attitudes about those PD activities, and 3) the majority of participant teachers believed that PD activities were necessary for improving their instructional skills. As these studies have clearly shown, teachers' attitudes toward professional development are one of the key factors influencing their participation in PD programs. In order to increase the participation rate of teachers in professional development activities, it is necessary to build positive attitudes toward professional development among teachers (Garip, 2011, personal communication).

b. Self-Efficacy

The second set of internal factors related to PD participation is the teacher's perception of his/her self-efficacy for teaching. Teachers are a heterogeneous group (Guglielmi & Tatrow, 1998) with different beliefs about themselves. Albert Bandura (1986) defined self-efficacy as "people's judgment of their capabilities to organize and execute courses of action required to attain designated types of performance" (p.391). Bandura (1986) pointed out that self-efficacy "is concerned not with the skills one has but with judgments of what one can do with whatever skills one possesses" (p. 391).

Some researchers have found the importance of teachers' "self efficacy" on education (Ashton, 1984; Ashton & Webb, 1986; Berman, McLaughlin, Bass, Pauly, &

Zellman, 1977; Brookover & Lezotte, 1979; Dembo & Gibson, 1985; Guskey, 1988; Hoy & Woolfolk, 1993; McLaughlin & Marsh, 1978; Lee & Gallagher, 1986; Ware & Kitsantas, 2007). Wexler (2000) has stated, "people with the capacity for self-efficacy not only manifest emotional self-control, but also use this to accomplish specific pre-set goals" (p. 3).

There are various definitions of teacher efficacy. For instance, Guskey and Passaro (1994) have defined teacher efficacy as "teachers' belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated"(p. 4). It has also been described as "the extent to which the teacher believes he or she has the capacity to affect student performance" (Berman et al., 1977, p. 137). Similarly, Ross and Bruce (2007) have defined "… efficacy is a teacher's expectation that he or she will be able to bring about student learning" (p.50). Similarly, Aydin (2011) has defined teacher efficacy as "Teachers' own beliefs about their capacity to teach (Aydin, 2011, personal communication).

Each teacher has his or her own self-efficacy related to his or her own teaching ability. Lohman (2006) has found that self-efficacy is one of the most important factors affecting teachers' participation in learning activities. How one feels about their ability to teach may influence what they view to be important, and thus effect which new ideas and approaches teachers value and consequently adopt as a part of their pedagogical routine (Smylie, 1988).

As a consequence, PD activities have the potential for both positive and negative implications for teachers (McLaughlin & Talbert, 2006) resulting in the powerful ability to change teachers' individual behaviors. As the above studies indicate self-efficacy of

teachers is an important factor in education and one of the key factors influencing teachers' participation in professional development activities.

2. External Factors

There exists a general consensus among PD researchers that external factors affect teachers' participation in PD activities. In this section, the researcher will discuss the following external factors: time, funding (supplementary salary), principal influence, colleague influence, and school culture.

a. Time

Time can be broken down further into three components: (1) work-time, (2) personal, leisure-time, and (3) family-time. The responsibilities of teachers have changed over the years, and therefore the workload of teachers has noticeably increased beyond just time spent teaching in the classroom (Lohman, 2006); which in turn means that teachers are spending much more time on teaching-related tasks, and consequently have very limited time to participate in PD activities (Hodkinson & Hodkinson 2005; Klingner, Vaughn, Hughes, & Arguelles, 1999).

A number of studies have emphasized that time is one of the most influential factors impacting teacher participation in PD activities and have shown that the lack of time affects teachers' participation in PD programs (Collinson, 2000; Collinson & Cook, 2004; Demirtas, 2010; Easton, 2008; Guskey, 1999; Guskey, 2003; Harris, Day, Goodall, Lindsay, & Muijs, 2005; Hirsh, 2001; Hodkinson & Hodkinson, 2005; Klinger et al., 1999; Klinger, 2004; Kwakman, 2003; Lohman, 2006; Moss & Noden, 1994; Orhan & Akkoyunlu, 1999; Postholm, 2011; Richardson, 1997; Richardson, 2003; Rozenholtz,

1989; Rogers et al., 2007; Sandholtz & Scribner, 2006; Thompson & Zeuli, 1999; Visser et al., 2010; Watts & Castle, 1993; van Woerkom, Nijhof, & Nieuwenhuis, 2002; Yamagata-Lynch & Haudenschild, 2009). Similarly, Scanlan (1986) and Valentine (1997) have illustrated that incompatibilities of time affects the participation of individuals in job-related education and learning activities. Additionally, a study by Collinson and Cook (2000) supported the notion that lack of time impacts teachers' participation in PD activities. According to their findings, time shortage is one of the most serious problems linked to low participation of teachers in PD activities (Collinson & Cook, 2000).

In addition, the literature related to time has found that family responsibilities affect the participation of individuals in continuing professional education (Grabowski, 1976; Robinson-Horne & Jackson, 2000; Valentine & Darkenwald, 1990). Similarly, Valentine (1997) identified family responsibilities as one of the most important limiting factors in adult participation in job-related education. Many teachers have personal lives filled with responsibilities related to their families. These responsibilities include child-care, care for aging parents, spousal duties, and leisure time activities spent with family. These responsibilities all consume teachers' time, causing time allocation issues, and adversely affecting their decisions to participate in PD activities (Aydin, 2011, personal communication). Duquette, Painchaud, and Blais (1987) have reported that having a family, including young children in the home, and working full or part-time impacts individuals' ability to participate in any educational activities.

In this context, Abdal-Haqq (1996) has emphasized the importance of providing adequate time for teachers in order to increase their participation in PD activities. Ozer

(2004) has found the importance of setting aside appropriate time for any PD activity and recommended that "In-service training activities may well become a part of the teacher's working schedule at school. In other words, the teachers may spend certain working hours in a week on in-service training instead of teaching students" (p. 97-98). Many studies have suggested strategies for making time for the increased participation of teachers in PD activities (Donahoe, 1993; Watts & Castle, 1993). These strategies include: (a) using substitutes or releasing students early; (b) buying teachers' time; (c) creating common scheduling time for similar assignments among teachers; (d) restructuring time; and (e) better using available time for professional development programs (Corcoran, 1995; Donahoe, 1993; Watts & Castle, 1993). Similarly, Raywid (1993) has suggested three approaches to find time for teachers: (a) to extend the school day or year; (b) to take out some time from the existing schedule; and (c) to change the staff operational model.

Consequently, as found by Lohman (2006), time is one of the most important determining factors affecting teacher participation in learning activities, with lack of time frequently inhibiting their participation. Providing enough time for teachers is one of the vital factors in increasing their participation in PD activities (Corcoran, 1995). Therefore, adequate time should be provided for teachers in order to encourage their participation in PD programs (Villegas-Reimers, & Reimers, 2000).

b. Funding

Funding is one of the most important factors, not only for the design and implementation of PD activities, (Corcoran, 1995; Postholm, 2011) but also for the participation of teachers in these PD activities (Lohman, 2006; Richardson, 1997). A

number of studies have clearly emphasized the importance of funding (salary supplement) for teachers in PD activities (Abadiano & Turney, 2004; Birman et al., 2000; Corcoran, 1995; Hering & Howey, 1982; Richardson, 2003), and shown that it affects the participation decisions of individuals in PD activities (Valentine, 1997). There is an agreement among researchers that funding (financial support-salary supplement) is one of the key factors encouraging participation of teachers in PD activities (Easton, 2008; Hodkinson & Hodkinson, 2005; Shafer, 2009). Hodkinson and Hodkinson (2005) have asserted based on their findings that "If spare teaching capacity could be funded in schools it would allow educational leave and periods of working in other schools to happen" (p.127). Leonard and Leonard (2003) concurred with Hodkinson and Hodkinson (2005) about the importance of funding for the PD of teachers and explained that "Making provisions for teachers to work together during and outside school hours may indeed require reallocation of resources or securing additional funding" (Leonard & Leonard, 2003, online, unpaged).

The link between time and cost is an essential one to consider. If leaders give teachers more time out of the classroom to participate in PD, or require them to attend training outside of their work hours, they must either pay substitute teachers or pay teachers extra for their additional time (Leonard & Leonard, 2003). If teachers receive salary increases through participation in PD activities, they are more likely to attend (Yamagata-Lynch & Haudenschild, 2009). However, in times of budget retrenchment, finding available funding to support the highest quality PD programs may be difficult. PD programs may even have to be eliminated in order to protect the financial stability of schools and allow them to continue to support the core functions of schools.

c. Principal Influence

Research has found that the principals' influence has great importance on the decisions of teachers to participate in PD activities. The general consensus is that the principal is the main actor influencing the participation of teachers in PD activities in or beyond the school. They set the tone by creating a positive or negative school culture (McLaughlin & Talbert, 2006). Donahoe (1993) discerned the importance of the principal in creating an effective school culture. Collinson and Cook (2000) supported this idea and found that principals play a major role in the PD of teachers; the degree of support from principals can positively or negatively affect teacher participation in PD activities. In a similar vein, Payne and Wolfson (2000) found the importance of principals for teachers' participation in professional development activities and affirmed, "As the leader of a learning organization, the principal must motivate teachers to continue to grow professionally throughout their careers" (p. 20). Also, Meister (2010) has stated that the supportive behaviors of principals positively impact the PD of teachers. Wideen (1992) has found in his study that the principals affect the professionalism of teachers. Payne and Wolfson (2000) have identified five roles of principals in relation to the PD of teachers. These are:

> The principal serves as a role model for continual learning and motivates and inspires others to pursue learning opportunities and further their own knowledge. The principal is the leader of a learning organization setting high expectations including the expectation of lifelong learning for everyone in the building. The principal motivates and supports development by assisting teachers and removing the barriers and obstacles

that frequently inhibit professional growth and prevent positive change. The principal also provides resources essential to teachers' growth. Finally, the principal facilitates teachers' professional development activities (p. 15).

Postholm (2011) has found in her study that the principal plays a key role in teachers' professional development and said that, "A continuous development of practice appears to rely on a common vision or objective among teachers and school leaders" (p. 567). Similarly, Maeroff (1993) has pointed out that having supportive principals helps to create a learning culture. Similarly, Sandholtz and Scribner (2006) found that school leaders should be facilitators of PD activities. Consequently, the principal is one of the most important influences over teachers' decisions to participate in PD activities.

d. Colleague Influence

The importance of the influence of colleagues on teachers' decisions to participate in PD activities among PD researchers cannot be underestimated. A broad look at the literature states that having a learning culture among teachers (colleagues) in schools encourages teachers' decisions to participate in PD activities. For instance, Meister (2010) discovered in her study that participants report their colleagues are the most important people in their work. Rosenholtz, Bassler, and Hoover-Dempsey (1986) found that if teachers have collegial relations in elementary schools, they improve their sense of professional growth. Senge (2006) has shown that having common understandings and visions are important for teachers' development. Postholm (2011) found in her study the importance of colleagues and stated, "A continuous development of practice appears to rely on a common vision or objective among teachers and school leaders" (p. 567). Also,

Kontoghiorghes (2001) and Tracey, Hinkin, Tannenbaum, and Mathieu (2001) have acknowledged that peer support is the main factor for the decision of individuals to participate in professional learning activities.

Consequently, as the above studies show that colleagues' influence has great importance on teachers' participation in PD activities.

e. School Culture

Having a supportive school culture is another important external factor affecting teachers' participation in professional development activities. Researchers have found that school culture holds great importance for teachers' participation in PD activities (Earley & Bubb, 2004; Kontoghiorghes, 2001; McLaughlin & Talbert, 2006; Opfer & Pedder, 2011; Postholm, 2011; Sandholtz & Scribner, 2006; Tracey et al., 2001). Similarly, Day (1999) has asserted that school culture has the potential to affect negatively or positively the PD of teachers. Pedder et al. (2005) argue for the importance of supportive school culture for teachers and reveal the importance of a supportive school culture for teachers' professional learning. Lohman and Woolf (2001) found that the work environment of teachers influences their participation in learning activities. In short, having a learning culture, common understandings, visions, and shared values among teachers in schools is important both for building a supportive school culture and for ongoing teacher professional development (McLaughlin & Talbert, 2006; Senge, 2006; Robinson & Carrington, 2002; Westheimer, 1998).

As the broad literature above illustrates, having a positive school culture is one of the most important factors encouraging teachers' participation in PD activities.

3. Teachers' Personal Characteristics

In addition to all the above-mentioned factors, teachers' personal characteristics might influence their participation in PD activities. For instance, Bayindir (2009) has explored the relationship between the number of years of teaching experience and teachers' participation in PD activities. She (2009) found that new teachers (those with fewer than 5 years of teaching experience) and experienced teachers (those with over 21 years of teaching experience) report that participation in PD activities is unnecessary and therefore often view it as a waste of time. Ozer and Beycioglu (2010) have explored the effects of teacher characteristics, such as gender and teaching experience, on the attitudes of teachers in terms of PD activities and found that: 1) female teachers have more positive attitudes toward PD activities than do male teachers and 2) experienced teachers generally have negative attitudes about PD activities. Consequently, gender and years of teaching experience impact teachers' participation in PD activities. Torff and Session (2008) examined how personal characteristics such as age, years of teaching experience, gender, grade level (elementary versus secondary), and level of educational attainment affect the attitudes of teachers as related to PD programs and found that age, years of teaching experience, and the grade level in which they teach affects teachers' attitudes about PD activities. As a result, they influence teachers' participation in PD activities. Therefore, these factors must be included in any study of teacher participation in PD.

Professional Development Policies and Practices in Turkey

Because this study has been conducted in Turkey, and most of the above research has been conducted in the U.S. or Europe, it is important to consider factors relevant to the cultural context of the participants. Since the founding of the Republic of Turkey

(1923), education has been one of the most important goals for the government (Ozer, 2004). Since the beginning of the 1960s, Turkey has recognized the significance of PD activities, not only in education but also in other occupations (Ozturk & Sancak, 2007; Selimoğlu & Yılmaz, 2009). In response to the growing need, the Ministry of National Education (MONE) founded the In-service Training Department in 1960 (Ozer, 2004). Consequently, in-service training of teachers at the pre-school, primary and secondary education levels was taken over by the In-service Training Department and continues in that vein today (Demirtas, 2010; Ozer, 2004).

At the turn of the twenty-first century, the importance and value of PD programs for teachers in Turkey was seriously called into question (Saban, 2000). As a result, Turkish researchers have begun studying the phenomenon with a greater focus. The results indicate a clear correlation between the quality of education and the quality of teachers (Demirtas, 2010; Kanli & Yagbasan, 2002; Orhan & Akkoyonlu, 1999; Ucar & Ipek, 2006). Findings emphasize the importance of in-service training programs for teachers (Azar & Karaali, 2004; Erisen, 1998; Kanli & Yagbasan, 2002; Orhan & Akkoyunlu, 1999; Ucar & Ipek, 2006) and acknowledge that PD programs are as important as pre-service training programs in quality teacher development (Boydak, 1995; Demirtas, 2010; Gonen & Kocakaya, 2006; Kanli & Yagbasan, 2002; Kaya, Cepni, & Kucuk, 2004; Orhan & Akkoyunlu, 1999; Saban, 2000; Seferoğlu, 2005; Ucar & İpek, 2006). Likewise, Ozer (2004) has proposed that "In-service training is especially important in the maintenance of continuous professional development" (p. 92), Further, Demirtas (2010) has noted that teachers lacking the adequate pre-service training need additional in-service training (PD) programs to fully develop their proficiency in

teaching. As a result of recent studies, the PD of teachers has become an integral part of development plans and government programs; directly impacting the number of discussions about the necessity and importance of PD activities and attempts to increase the participation rate of teachers in PD programs in Turkey (Yuksel, 2011, personal communication).

Mandating teacher participation in PD programs is one of the ways to increase teacher participation. According to the MONE, in fact, each teacher in Turkey is required to participate in PD activities (Gonen & Kocakaya, 2006; Kaya, Cepni, & Kucuk, 2004). Ozer (2004) has supported this by stating:

> Teachers are obliged to attend in-service training programs either at home or abroad by laws such as the Civil Servants' Law No. 657 (Devlet Memurlari Kanunu, 1965, a.214) and the National Education Principal Law No.1739 (Milli Egitem Temel Kanunu, 1973, a.48). According to these laws, the In-service Training Department of the Ministry of National Education is responsible for the in-service training of teachers. On the other hand, Higher Education Council Institutions' Organization Law No. 2809 (1983, a.5) assigns universities to offer in-service training to teachers" (p. 91).

In accordance with the above-mentioned laws, each year the In-service Training Department of the Ministry of National Education provides a list of PD programs offered to teachers. Based on these laws and the corresponding annual list, MONE assumes that all teachers participate in the requisite PD programs.

In her study, Jackson (2000) emphasized the importance of voluntary participation in PD activities. Ozer (2001) found that 31.3% of Turkish teachers are willing to participate in the in-service training programs, while the rest of the teachers (68.7%) are not willing to attend such programs. Correlating with these findings, the results of the Teaching and Learning International Survey (TALIS) have found that while teachers' rate of participation in PD in the 23 participating countries is at 89% on average over the 18 months prior to the survey, the corresponding Turkish participation rate is only 74.8% (TALIS, 2009). In fact, the participation rate of Turkish teachers in PD activities is the lowest among all of the participating countries in the TALIS.

One potential reason for lower participation rates among Turkish teachers might be the lack of formal enforcement of teacher participation in PD activities by the government (Cetin, 2011, personal communication). Another reason is that teachers have life-long jobs in Turkey. As a result, neither superintendents nor principals hold any formal power to compel teacher participation in PD activities. Consequently, teachers decide whether or not to participate in PD programs (Aydin, 2011, personal communication). Additionally, salary supplements are not available for teachers in Turkey, and this is another potential reason for lower participation rates. Some Turkish educators and researchers overtly explain that funding is one of the most important factors impacting the participation of teachers in PD activities (Acikalin, 1987; Beduk, 1997; Kacan, 2004; Taymaz, Sunay, & Aytaç, 1997; Pehlivan, 1997; Ucar & Ipek, 2006). Similarly, Demirtas (2010) and Orhan and Akkoyunlu (1999) have talked about the importance of funding on PD programs in Turkey and have shown in their study that funding seriously influences the participation of teachers in PD programs. Ozer (2001)

has mentioned that salary supplement (money) is one the greatest incentives for teachers to participate in more PD activities with enthusiasm. Unless and until MONE acknowledges the factors contributing to this limited participation and adopts an adequate solution, the participation rate of teachers will continue to be lower than that of other countries around the world (Aydin, 2011, personal communication). In addition, some Turkish educators agree that time is one of the most important factors for the participation of teachers in PD activities (Acikalin, 1987; Beduk, 1997; Kacan, 2004; Taymaz, Sunay, & Aytaç, 1997; Pehlivan, 1997; Ucar & Ipek, 2006). Time and funding are related factors. If teachers are provided time for PD within the school day to participate, funding must be provided for substitute teachers. If they must attend after-school sessions, and especially if these after-school sessions are unpaid, they compete with other demands on their time. Currently there may be too few incentives to encourage voluntary participation. If teachers were to receive salary supplements for after-school sessions, however, local or national funding would need to be provided.

Conceptual Framework for PD Participation Based on the Theory, Research and the Context of Teaching in Turkey

There is no single model to explain why adults participate in continuing professional education (Becker & Gibson, 1998). As the literature review on theories of participative behavior showed, the *Theory of Reasoned Action* (Fishbein & Ajzen, 1975), the *Recruitment Paradigm* (Rubenson, 1977), and the *Psychosocial Interaction Model* (Darkenwald & Merriam, 1982) focus on psychological (personal/internal) and sociological (environmental/external) factors for individual decisions to participate in continuing professional education activities. Therefore, the researcher combines factors

from these theories, factors identified in the research, and factors in the particular context of teacher PD in Turkey, to develop a conceptual framework for the study. Because the fundamental purpose of this study is to better understand which factors are related to Turkish teachers' participation in PD activities, the researcher includes both internal and external factors in the framework.

The conceptual framework (see Figure 2.2) consists of four components. The first component is internal (personal) factors. These personal factors include teachers' attitudes toward professional development activities and teachers' self-efficacy. The second component of this framework is external (environmental) factors. These environmental factors include time, funding (salary supplements), the influence of principal, the influence of colleagues, and the school culture. Teacher personal characteristics are the third component of this framework. They include gender, age, years of teaching experience, grade level of teaching assignment, and education level. The last component of this framework is teachers' participation level in PD.

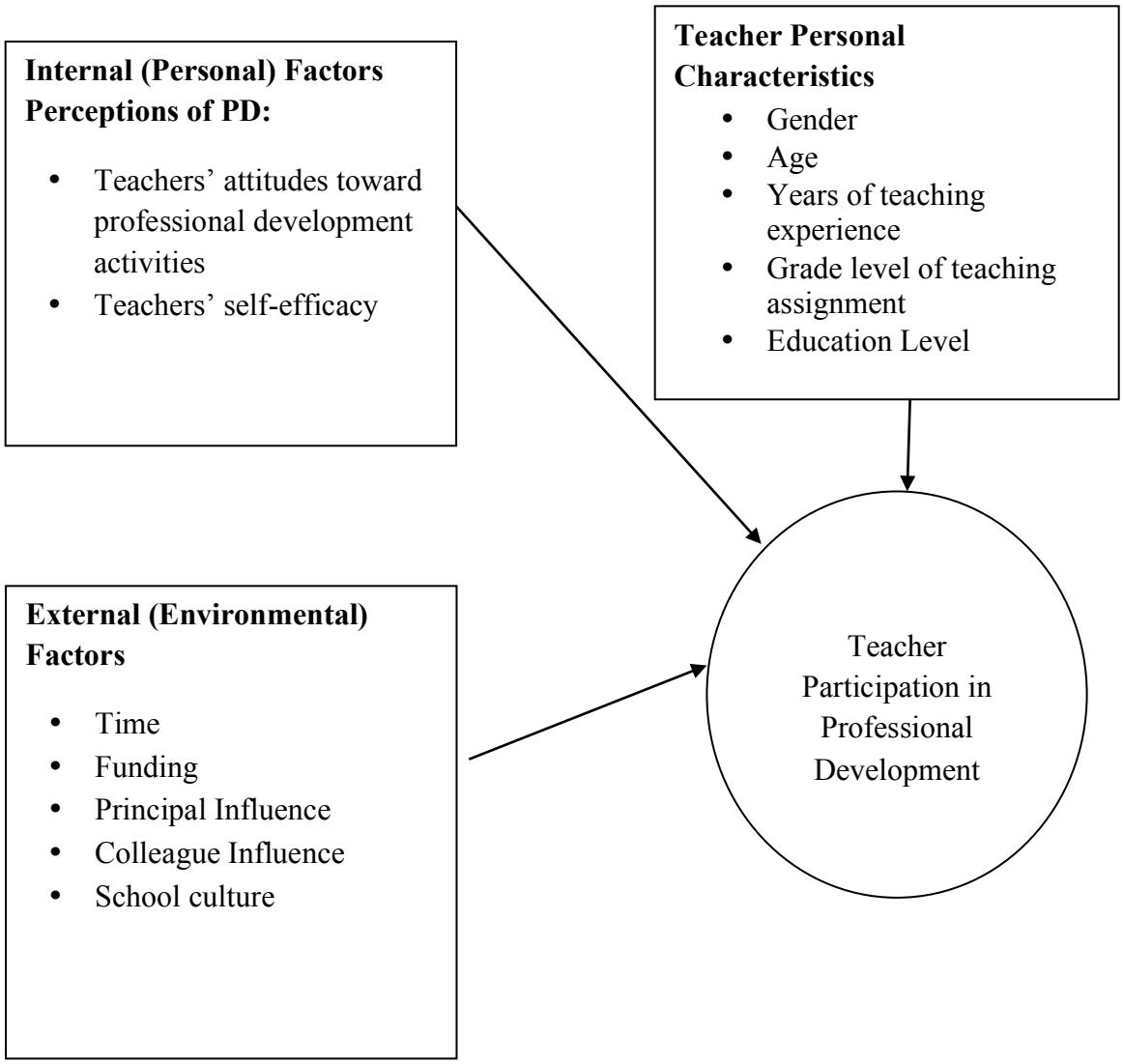


Figure 2.2. Conceptual Framework

Summary

As the literature review has indicated, and the international consensus shows, PD activities are important and beneficial for both teachers and students (Boydak & Dikici, 2001; Carver & Katz, 2004; Dall'Alba & Sandberg, 2006; Desimone et al., 2002; Easton, 2008; Fishman et al., 2003; Jonson, 2002; Lowden, 2005; Moir & Gless, 2001; Payne & Wolfson, 2000). Therefore, the professional development of teachers is one of the most central concerns for many countries around the world. Even though PD research has been occurring in developed countries such as the US and UK for a long time, currently there

is an increased interest in this phenomenon in Turkey. In this regard, the researcher aims to fill a gap in the resultant literature that exists in the field of PD of teachers in Turkey. Given the findings of TALIS, the researcher focuses on factors related to teacher participation in PD activities in Turkey. The above-reviewed resources have supported the research intent and expanded the knowledge related to select factors affecting teacher participation in PD activities.

CHAPTER THREE - RESEARCH DESIGN AND METHODS

Introduction

The purpose of this study was to examine the relationship between certain factors (internal [personal] and external [environmental]) and elementary school teachers' participation in PD programs in Osmaniye, Turkey. In addition, the study sought to explore whether teachers' characteristics, such as gender, age, years of teaching experience, grade level of teaching assignment, and education level of teachers predict their participation in PD programs. The study employed a survey research design; its aim was to measure the relationships between independent (internal and external factors) and dependent (teachers' participation in PD activities) variables using Poisson regression analysis, based on data collected from a sample.

There are currently no existing educational databases on Turkish teachers' perspectives regarding how internal and external factors may influence their participation in PD activities. The TALIS database did not include data on explanatory factors. Therefore, a secondary analysis of an existing dataset is not possible. To obtain primary data, the researcher conducted a survey of teachers in one city, Osmaniye, Turkey. In this study, the conceptual framework for statistical analyses was developed based on the existing literature on factors related to teachers' participation in PD activities, as well as theories that posed a division between internal and external explanations. In this conceptual framework, internal and external factors function as independent variables, and teacher participation in PD activities served as the dependent variable. Teacher

characteristics such as gender, age, years of teaching experience, grade level of teaching assignment, and level of teachers' education were analyzed as control variables.

The researcher selected elementary school teachers in Osmaniye, Turkey. As of the 2009-2010 academic year, in the center district of this city, there were 66 elementary schools employing1690 teachers (865 male and 825 female) (http://osmaniye.meb.gov.tr/dosya/il_geneli_istatistik.pdf). It is notable that in this population the proportion of male elementary teachers is much higher than in the U.S., where most PD research has been conducted. The researcher randomly selected 30 elementary schools and surveyed the teachers. Based on average school size, the sample size for this study was tentatively the 600 teachers (assigned to grades 1 - 8) in the selected 30 elementary schools from the center district of Osmaniye, Turkey.

Using a multiple-stage sampling method, the researcher randomly selected 30 out of a total of 66 elementary schools and invited all teachers present on the day of the survey administration (approx. 600) in the selected schools (about 20 teachers per school) to voluntarily complete the survey. Because all the teachers present at the time of administration were invited to participate in the survey, the response rate was expected to be 100%. However, because participation was voluntary, some teachers declined to participate. In addition, some teachers were not present on the day the survey was administered. This potentially diminished the final response rate to 92%.

In an effort to circumvent common issues related to response rate and financial concerns, the researcher planned to combine "group administration" and "Internet survey" methods. The researcher assumed that each school in Osmaniye, Turkey had at least one computer laboratory with Internet connectivity. However, while the researcher

was conducting the pilot study, some participants strongly suggested to him that the researcher *not* use the Internet survey method because 1) some schools might not have internet connectivity when the researcher is at the school and 2) some teachers might not be willing to participate in an Internet survey. Therefore, after talking with his advisor, the researcher changed his plan and opted for a group administration of a paper and pencil survey. The researcher personally visited each participating school and individually administered the survey during the teachers' planning period at the end of the school day. As a result, the data were collected via "group administration" technique in the school settings.

Research Questions

This research addressed the following questions:

1. How does elementary school teachers' participation in PD activities differ according to their personal characteristics?
2. What are the internal factors associated with teacher participation in PD activities? For example, how do teachers' attitudes toward professional development activities and teachers' self-efficacy influence their participation in PD activities?
3. What are the external factors associated with teacher participation in PD activities? For instance, how do time, funding, principal influence, colleague influence, and school culture impact the participation of teachers in PD activities?

The following hypotheses were tested in this study:

H1.Young, new, female elementary school teachers participate in more PD activities than older, experienced, male teachers.

H2. A positive relationship exists between teachers' attitudes toward professional development activities and their participation in PD activities.

H3. A positive relationship exists between teachers' self-efficacy and their participation in PD activities.

H4. There is a negative relationship between time and teachers' participation in PD activities.

H5. There is a positive relationship between funding and teachers' participation in PD activities.

H6. There is a positive relationship between supportive principals and teachers' participation in PD activities.

H7. There is a positive relationship between supportive colleagues and teachers' participation in PD activities.

H8. There is a positive relationship between teacher perceptions of a positive school culture and participation in PD activities.

Setting

The setting selected for this study is Osmaniye, one of the cities in southern Turkey. Turkey is situated in the Middle East, spreading out over 783,562 square kilometers –it is slightly larger in size than the state of Texas. According to the Central Intelligence Agency (CIA), the total population is about 79 million (July 2011 estimation); the majority are ethnic Turks (70-75% of the population), with the remainder consisting of ethnic Kurds (18%) and a collection of other minorities (7-12%) (2008 estimation). Turkish is the major/official language. The predominant religion is Islam (99.8 % of the population). Turkey has 81 provinces and seven census regions. These

regions include: Marmara, the Black Sea, Central Anatolia, Eastern Anatolia, Southeastern Anatolia, the Mediterranean, and the Aegean (www.basbakanlik.org.tr).

Osmaniye is one of eight provinces located in the Mediterranean region. The province of Osmaniye is divided into seven districts including: Center, Kadirli, Duzici, Bahce, Toprakkale, Hasanbeyli, and Sumbas (www.basbakanlik.org.tr). According to recent demographical statistics, the total population of Osmaniye is 479,221 and the population of the city center is 198,836 (www.osmaniye-bld.gov.tr).

National Education Statistics (NES) indicate that as of 2010 the number of elementary schools in Turkey is 33,310, with the total number of elementary school teachers at 485,677. The Ministry of National Education (MONE) approximates (based on the current population) that the number of elementary school teachers in the province of Osmaniye is around 3,200 and the number of elementary schools is around 221(www.meb.gov.tr). The data, according to the Directorate of National Education (DONE) in Osmaniye, is consistent with the assumptions of MONE, indicating the number of elementary school teachers to be 3,515 in the 221elementary schools across all seven districts in the province of Osmaniye (www.osmaniye.meb.gov.tr).

Due to a limited ability to reach every school in Osmaniye, the researcher focused his study on the elementary school teachers in the Center District. As can be seen in Table 3.1, The Center District consists of 66 elementary schools employing 1,690 teachers, and 21 high schools employing 794 teachers. More details about the number of schools and teachers in the province of Osmaniye are included in Table 3.1.

Table 3.1

The Number of Schools and Teachers from Each District in the Province of Osmaniye

District	Elementary School				High School			
	Number of Schools	Male Teacher	Female Teacher	Teacher Total	Number of Schools	Male Teacher	Female Teacher	Teacher Total
City Center	66	865	825	1690	21	549	245	794
Kadirli	64	480	412	892	13	260	132	392
Duzici	51	284	232	516	9	150	69	219
Bahce	8	77	54	131	5	52	20	72
Toprak kale	9	47	45	92	1	12	4	16
Hasanb eyli	6	26	9	35	1	6	2	8
Sumbas	17	90	69	159	1	7	3	10
Total	221	1869	1646	3515	51	1036	475	1511

http://osmaniye.meb.gov.tr/dosya/il_geneli_istatistik.pdf

Sampling

There are a variety of ways to select individuals for inclusion in a sample, and this decision varies from study to study. It is a generally accepted belief among researchers that working with a large sample size reduces sampling errors, while improving the reliability of the results (deVaus, 1995; Kline, 2005; Newman & McNeil, 1998). Fowler (2009) specifically points to increasing sample size as one way to increase the reliability of survey estimates.

While the researcher had access to the names of the elementary schools in the Center District, there was no public database from which to retrieve individual teacher's

names for these schools. In this situation, multistage sampling provides a useful approach (Fowler, 2009). Therefore, focusing on the selected Center District of Osmaniye, the participant teachers were sampled by using a multistage sampling method (Fowler, 2002; Fowler, 2009). In an attempt to provide individual teachers with an equal chance at being selected, the researcher began by randomly selecting 30 of the 66 elementary schools in the district. From these 30 schools, the researcher invited all teachers in the school to complete the survey.

The Center District was selected for the following reasons: (1) the researcher is from the Center District of Osmaniye and thus is familiar with the geographical region; (2) as a result of growing up in the area, the researcher has contacts within the Directorate of National Education (DONE) of Osmaniye that facilitates the data collection process; and (3) due to the vastness of the province, traveling to multiple districts is cost and time prohibitive for the researcher. Therefore, even though Osmaniye consists of seven districts, for the above-mentioned reasons, this study focused on only the Center District.

In the Center District of Osmaniye, there are 66 elementary schools and 1,690 elementary school teachers. On average, each elementary school has 20 teachers. From the 66 elementary schools in the Center District, the researcher randomly selected 30 elementary schools in which to administer his survey. The researcher was aiming for a sample of at least 400 elementary school teachers; to this end, approximately 600 elementary school teachers were invited to complete a teacher questionnaire.

Data Collection

Survey methods, including personal interviews, telephone surveys, mail surveys, and Internet surveys, all have potential advantages and disadvantages inherent in their

design. In an attempt to increase the former and decrease the latter, researchers have suggested combining different types of surveys (Fowler, 2009; de Leeuw, Dillman, & Hox, 2008; Dillman, 2007). After reviewing the literature, the researcher decided that combining "a group-administered survey" and "Internet survey" approach would be the most appropriate data collection method for this study. However, during the pilot study, the researcher recognized that there would be difficulties using an Internet survey based on the feedback of some participants. Consequently, the researcher changed his mind and opted solely for "a group-administered survey" rather than using the combination of "group-administered survey" and "Internet survey" approaches; hoping to avoid barriers to data collection due to issues surrounding technology.

As a self-report type survey, a group-administered survey method provides participants with ample time to fully consider and respond to the questions posed in a questionnaire (Fowler, 2002). Additionally, the response rate of group-administered surveys is higher than that of mail and/or Internet surveys. Group-administered surveys provide opportunities for survey administrators to explain the study and answer questions related to the questionnaire (Fink, 2003; Fowler, 2002; Fowler, 2009).

The questionnaire employed in this study consists of only close-ended questions. The ease of completion of this sort of questionnaire allows participants to respond by marking an appropriate choice from a set of alternative responses.

After successfully passing his proposal defense on April 23, 2012, the researcher contacted the Director of National Education Department in Osmaniye, and explained to him the purpose of study, and the reason for conducting his research in Osmaniye; then asked for his permission to collect data in Osmaniye. By the end of the conversation, the

Director of National Education Department in Osmaniye had agreed to help the researcher coordinate his data collection. Consequently, prior to traveling to Osmaniye, the researcher had obtained permission from the Director of National Education Department in Osmaniye to collect data. Upon arriving at the Directorate of National Education (DONE), the researcher visited the Director of National Education Department for Osmaniye and further explained to him about the data collection process and what it would entail.

Prior to beginning data collection, the researcher sent a letter explaining the purpose of this study and how the survey was to be implemented to the Directorate of National Education (DONE) of Osmaniye seeking permission to conduct a teacher survey in the randomly selected elementary schools in the Center District. Upon approval by the DONE administrators, the researcher administered the survey from the 15th of May to the 15th of June, 2012. The researcher was the sole administrator of the survey.

The process of data collection started with a consultation with the superintendent of the Center District to arrange appointments to administer surveys at the selected schools in the district. The researcher provided the superintendent with the official permission letter from the DONE, along with a list of the randomly selected schools. In accordance with the DONE policy, the superintendent contacted the principal of each randomly selected school and asked for his/her cooperation allowing the survey to be conducted during the teachers' planning period at the end of the school day. The superintendent provided each principal with a letter of introduction including the purpose of the study and a copy of the official permission letter from the DONE. Upon receiving cooperation from each principal, the superintendent proceeded to schedule appropriate

times and dates for survey administration. Once all principals had been contacted by the superintendent, and each survey administration had been scheduled, the researcher individually verified the date and time of the appointment with each principal.

Before conducting the survey, with the help of his younger brother, the researcher photocopied enough surveys for each teacher in the selected schools. Additionally, the researcher's father and elder brother provided transportation to each of the selected schools according to the implementation schedule set with each principal. The survey was conducted from the 15th of May to the 15th of June, 2012. According to the arrangements made by the superintendent, on the date of survey administration, the principal announced the survey and introduced the researcher during a faculty meeting. At which time, the researcher briefly introduced the survey to the teachers, by way of a cover letter explaining the purpose of the study, a brief description of the questionnaire, and a brief discussion of ethical considerations; then he invited the teachers to participate in the study. Next, the teachers who chose to participate in the study proceeded with the researcher to the school's teachers' lounge where the researcher demonstrated the protocol for completing the paper-based, Turkish version of the questionnaire to the teachers.

Adhering to the ethical requirements established by the University of Missouri's Institutional Review Board (IRB), the anonymity of all participants were strictly maintained throughout the study; additionally participants were provided the assurance that the study would not pose any threat to them. Individual information was treated as anonymous, and the data were presented in the collective only. In order to assure that the study would not pose a threat to participants, the researcher explained to the teachers that

the principal would not have access to the survey data and the participation in the survey would not create any problems in their school. The researcher also explained that participation in this survey was voluntary; participants were free to withdraw consent, without penalty, from the study at any time. Completing the survey took approximately 25 minutes, during which time, the researcher remained in the teachers' lounge to address potential questions and/or concerns the participants had regarding the questionnaire. During the survey, the sample size of respondents decreased as a result of teacher absences on the day of survey administration and/or unwillingness on the part of some teachers to participate in the study. As a result, the response rate of the survey was slightly less (550) than the designated sample size (600 teachers). After collecting all data, the researcher deleted some of the answered surveys (25) due to excessive-missing data; resulting in 525 (87.5%) workable participants for the study.

Instrumentation and Measurement

Based on the nature of the research question being asked, the researcher utilized the survey research method, one of many effective methods for data collection (Guskey, 2000). While pre-existing questionnaires may be preferable due to their proven validity and reliability, the researcher was unable to find an instrument that specifically assessed the factors addressed in this study, relating to teachers' participation in PD activities. Therefore, the researcher developed a survey specifically designed for data collection in this study (See Appendix 6). In order to measure a complex and abstract concept, this questionnaire includes a variety of items related to teachers' behaviors and perceptions (de Vaus, 1995). The questionnaire employs close-ended questions and Likert-scale type answer choices for measuring the experiences and attitudes of teachers.

The research instrument in this study is a teacher questionnaire developed specifically to measure internal and external factors that influence teacher participation in PD activities. This questionnaire was developed based upon theoretical concepts and factors identified in the literature; and the items and scales intentionally address all of the principles included in the conceptual framework (see Figure 2.2). As previously mentioned, this framework was developed based on three commonly used theories of adult participatory behavior: (1) Fishbein and Ajzen's Theory of Reasoned Action (1975), (2) Rubenson's Recruitment Paradigm (1977), and (3) Darkenwald and Merriam's Psychosocial Interaction Model (1982), as well as various other research findings. With regard to the reliability and validity of the questionnaire, the survey was pilot tested, and that process will be addressed in more depth later in this chapter.

In order to measure the internal (personal) factors, the researcher developed two scales based on the theoretical principles in the literature: 1) teachers' attitudes toward professional development activities, and 2) teachers' self-efficacy. Teachers' attitudes towards PD activities affect their participation in PD activities. An example of items in this scale might ask to what extent a teacher sees the benefits of PD activities for improving instructional skills. Teachers' self-efficacy influences their participation in PD activities. For example, a question might ask how a teacher sees the necessity of PD activities for himself or herself.

For measuring the external (environmental) factors, the researcher developed five scales based on the theoretical principles in the literature, including: 1) time, 2) funding, 3) principal influence, 4) colleagues influence, and 5) school culture.

Time focuses on how teachers' family responsibilities and work responsibilities affect their participation in PD activities. For example, family obligations may require some of his or her time; a sample item addressing this concern might ask how a teacher's family duties impacts his/her participation in PD activities. Funding focuses on how money (salary supplements) impacts teachers' participation in PD activities. An example of this might ask how the lack of a salary supplement impacts his/her participation in PD activities. Principal influence is an explanation of how teachers' participation in PD activities are affected by the action of principals. An example of an item on this scale might ask how encouragement from a principal impacts teachers' participation in PD activities. Colleague influence is an explanation of how teachers' participation in PD activities has been affected by the action of their colleagues. An example of items in this scale might ask how encouragement by a teacher's colleagues impacts his/her participation in PD activities. Lastly, the influence of school culture is an explanation of how teachers' participation in PD activities has been affected by the school culture. An example of items in this scale might ask how shared values in school impact his/her participation in PD activities.

Instrument Development Process and Validity and Reliability

After a diligent search, the researcher was unable to find an appropriate, pre-validated instrument for this study; hence, the researcher developed a survey specifically designed to collect data on the factors under examination. The researcher utilized previous research and current terminology in the literature to create this survey. The questionnaire employed close-ended questions and Likert-scale type answer choices for measuring the experiences and attitudes of teachers. Then, the researcher used the

following methods to examine the reliability (internal consistency) and validity of the questionnaire:

First, the researcher asked a review panel consisting of two professors in the field of education, three graduate students in the college of education, and three elementary school teachers in Turkey, to review the questionnaire items for organization and appropriateness, in addition to commenting upon applicability of the content to the Turkish educational system. After reviewing the questionnaire, the panel commented that the overall vocabulary and meaning of the questions were clear and understandable for Turkish teachers. However, they provided suggestions on how to simplify a few specific terms that were difficult or confusing, and how to clarify a few questions with similar or incomplete meanings. Based on their feedback, the researcher adapted the survey.

Second, since a Turkish-version of the questionnaire was used for this study with Turkish teachers, the back-translation technique was applied to ensure equivalent meaning between the Turkish and English versions of the questionnaire. In this technique, one Turkish professor- an editor of national (Turkish) and international academic journals-was asked to perform the back-translation. At this point, the researcher examined the back-translation English version by comparing it to the original English version to determine whether the Turkish version was essentially equivalent to the English version, with little or no potential for misunderstanding.

Third, upon completion of the survey design, and prior to commencement of data collection, the researcher implemented a pilot study, a necessary and vital step to the successful administration of any effective survey research (Fraenkel & Wallen, 2003). The purpose of the pilot study was to improve and confirm the reliability (internal

consistency) of the survey constructs in the context of teachers in Turkey. Employing a pilot study enabled the researcher to test the survey with a small, sample group in order to verify the reliability of the survey instrument. For this purpose, a group of 41 elementary school teachers in Osmaniye, Turkey participated in the pilot study. Then, the researcher analyzed the results using SPSS, version 16 and found the corresponding Cronbach coefficient alpha to be .74. Based upon the results of this pilot study, the items and scales were further revised for the purpose of clarification and applicability to a Turkish context. In the event that the results indicated a lack of reliability, items were deleted and/or revised to more comprehensively and effectively assess what they were intended to measure.

The overall Cronbach's coefficient alpha reliability estimates proved satisfactory (.74). However, the researcher aimed to increase the Cronbach's coefficient alpha reliability to the level required for academic studies. In reliability testing, the reliability of the instrument is considered relatively high when the Alpha Coefficient of each scale (variable) is above or close to 0.7 (Heppner & Heppner, 2004). Some of the scales indicated an Alpha coefficient lower than 0.6; as a result, the researcher revised them to improve their reliability. While improving the reliability, the researcher examined the meaning of each item and compared its corresponding explanation to the overall meaning of the scale in an effort to determine whether the item should be deleted or modified. The researcher started by deleting the least relevant items and rechecking the reliability of each scale. Additionally, the researcher revised the scales in question by modifying the wording of specific items and/or adding additional items, until the criteria for survey reliability was met. Furthermore, during the application of pilot study, the teachers'

responses to the questions, technical problems, and comments were also used in order to improve the questionnaire items. As a result of the above process, the researcher improved the overall Cronbach's alpha coefficient to .902, indicating strong internal consistency. For the scales the Cronbach's alpha coefficient values were mostly greater than .70; reflecting internal consistency between items in the questionnaire with the actual sample. The reliability for each scale is presented in Table 3.2. The scales with the lowest reliability are those of time (.643) and funding (.625).

Fourth, the researcher generated a random list consisting of all of the items from the questionnaire. Then, the researcher asked the panel of reviewers to categorize the items; in an effort to check the researcher's grouping and to examine the construct validity of the survey. The results of this process were satisfactory because the panel of reviewers were able to categorize the items according to the researcher's grouping.

Fifth, the researcher employed exploratory factor analysis (EFA) to ensure the construct validity of the survey. In this process, the researcher first checked the assumptions of EFA and ensured that they were met. The EFA showed a Kaiser-Meyer-Olkin of .898. Field (2005) says, "A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors" (p. 6). In a similar vein, Kaiser (1974) declared that values between .5 and .7 are mediocre, values between .7 and .8 are good, values between .8 and.9 are great, and values above .9 are superb. For this data, a value of .898 would be considered great according to Kaiser. Therefore, the researcher is confident that exploratory factor analysis is appropriate for the data. Additionally, Bartlett's test was highly significant ($p<.001$); confirming the appropriateness of EFA. (See, Appendix 8). Afterwards, the researcher tested the

construct validity of the survey and found its construct validity to be satisfactory (See, Appendix, 9).

Finally, the researcher asked two professors in the field of education to review the survey items to evaluate the content validity of the survey; and according to their feedback, the researcher reached a satisfactory content validity of the survey.

Upon determining the reliability and validity of the questionnaire, the researcher developed the final iteration of the survey. Once the survey instrument was prepared, the researcher determined the participants in this study by using a multiple-stage sampling method.

Variables

For data analysis, this study used Poisson regression, a statistical technique which explores the relationship between a dependent variable (in this instance a count variable) and more than one independent variable (explanatory variables). The independent variables in this study are elementary school teachers' experiences with internal (personal) and external (environmental) factors, and the dependent variable is the number of times they participated in PD activities over the previous year. The independent variables related to internal (personal) factors, have been organized into two scales: 1) teachers' attitudes toward professional development activities, and 2) teachers' self-efficacy. The independent variables related to external (environmental) factors, have been organized into five scales: 1) time, 2) funding (salary supplement, 3) principal influence, 4) colleague influence, and 5) school culture. The control variables for this study include: gender, age, years of teaching experience, grade level of teaching assignment, and teachers' level of education.

1. **Independent Variable(s): Experiences with Internal and External Factors**

The independent variables in this study were measured by a set of questions about teachers' perspectives and experiences related to PD based on the conceptual framework. These variables include 36 items covering the seven factors (internal and external) mentioned above. The teachers were asked, "How much do you agree with the following statements about your participation in professional development programs?" Table 3.2 lists all of the survey items, grouped according to their corresponding principles. The responses to each of the statements were measured on a five-point Likert scale, with responses rated: (1) strongly disagree, (2) disagree, (3) unsure, (4) agree, and (5) strongly agree. Each participant response was coded corresponding to its Likert scale number, and from there, the researcher generated basic descriptive statistics (mean, range, and standard deviation) for each item on the scale.

Table 3.2

Question Items and Scales for Internal-External Factors with Correlation Coefficients, Including Final Coding

Scale	**Item**	**Final Coding**
Internal and External Factors Affecting Teachers' Participation in PD activities: How much do you agree with the following statements about your participation in professional development activities? *(36 items)*		
Teachers' attitudes toward professional development Alpha= .968	*Professional development activities are necessary for teachers.* *Professional development activities help teachers to develop their instructional skills.* *Professional development activities are valuable enough to justify the time*	1 = strongly disagree 2 = disagree 3 = unsure 4 = agree 5= strongly agree .: Sysmis

	spent. *Participating in professional development activities makes me feel better about myself.* *The best way for teachers to learn more is to participate in professional development activities.* *I enjoy participating in professional development activities.*	
Teachers' self-efficacy Alpha= .818	*I am able to successfully teach all relevant subject content to my students.* *When I try really hard, I can teach even the most difficult students.* *I have enough ability to be responsive to my students' learning needs.* *I can motivate my students to participate in learning activities.* *I am already a good teacher.*	1 = strongly disagree 2 = disagree 3 = unsure 4 = agree 5= strongly agree .: Sysmis
Time Alpha= .643	*The available professional development activities are scheduled at convenient times.* *I have time to regularly attend offered professional development activities.* *Professional development activities are not offered at the time when I am available.* *Family responsibilities make it difficult for me to participate in professional development activities beyond the work day.* *Teaching-related duties prevent me from participating in professional development activities beyond the work day.*	1 = strongly disagree 2 = disagree 3 = unsure 4 = agree 5= strongly agree .: Sysmis
Funding Alpha= .625	*Salary supplements would encourage me to participate in professional development activities.* *I would rather do extra-curricular*	1 = strongly disagree 2 = disagree 3 = unsure 4 = agree

	activities for pay than participate in professional development activities. *Expenses for travel prevent me from participating in professional development activities.* *Additional costs related to childcare/babysitting prevent me from participating in professional development activities.* *Lack of funding for additional personnel to cover classes prevents me from participating in professional development activities.*	5= strongly agree .: Sysmis
Principal Influence Alpha= .869	*My principal encourages me to participate in professional development activities.* *My principal expects me to participate in professional development activities.* *My principal removes barriers preventing me from participating in professional development activities.* *My principal provides resources for participation in professional development activities.* *My principal values professional development activities.*	1 = strongly disagree 2 = disagree 3 = unsure 4 = agree 5= strongly agree .: Sysmis
Colleague Influence Alpha= .772	*My colleagues and I share common values related to professional development activities.* *My colleagues encourage me to participate in professional development activities.* *My colleagues and I participate in professional development activities together.* *There is a culture among my colleagues that encourages me to participate in professional development activities.* *My colleagues and I share a common understanding related to teacher*	1 = strongly disagree 2 = disagree 3 = unsure 4 = agree 5 = strongly agree .:Sysmis

	development.	
School Culture Alpha= .741	*In my school all of the staff agree on common values about student learning and teaching.* *In my school we share the belief that teachers can learn to improve student achievement.* *The staff in my school collaborate often to improve student learning.* *Our school goals are based on knowledge of our students' learning.* *The working environment in my school is positive and supportive.*	

2. Dependent Variable

The dependent variable in this study is the number of times teachers participated in PD activities over the previous year. In order to measure this variable, the researcher provided a list of the professional development activities offered during the 2011-2012 academic years and asked, "Please select the professional development activities you attended within the last 12 months.".

3. Control Variables

The control variables included a set of questions about teachers' personal characteristics: gender, age, years of teaching experience, grade level of teaching assignment, and teachers' education levels. As mentioned in the literature, these factors are important because they influence the key variables. Therefore, the researcher needed to statistically control for these factors (variables) in order to diminish the possible bias of estimates of the correlations between dependent and independent variables.

The control variables were coded categorically. Gender was coded from 0 to 1 with the following categories: 0 = male, and 1 = female. Age was coded from 1 to 6 according to the following categories: 1 = as under 25, 2 = 25-29, 3 = 30-39, 4 = 40-49, 5= 50-59, and 6= 60+. Years of teaching experience was coded from 1 to 6 according to the following categories: 1 = 1-2 years, 2 = 3-5 years, 3 = 6-10 years, 4 = 11-15 years, 5 = 16-20 years, and 6 = 20+ years. Grade level of teaching assignment was coded from 1 to 6 according to the following categories: 1= 1st grade, 2=2nd grade, 3= 3rd grade, 4= 4th grade, 5=5th grade, and 6= 6th grade- 8th grade. Teachers' education level was coded from 1 to 6 according to the following categories: 1= Less than high school, 2= High school diploma, 3=Associate's degree, 4=Bachelor's degree, 5=Master's degree, and 6= Doctorate degree.

It is important to note that the researcher included age and teaching experience as two separate control variables. The rationale behind this choice stems from the fact that age and experience might not necessarily correlate. In order to become a teacher in Turkey, prospective teachers must take a national exam after graduating from the college of education. Since only a select group will amass the necessary points to qualify each year, it is not uncommon for teachers to have to retest annually until they pass. Therefore, there is not necessarily a direct relationship between age and teaching experience in Turkey.

Response Rate

In the literature, there is no consensus among researchers in reference to acceptable response rates. Fowler (2009) notes, "There is no agreed-upon standard for a minimum acceptable response rate" (p.51); while Johnson and Christensen (2008) claim

that a 70 % response rate is acceptable for a survey study. On the other hand, Shannon (1948) contends that an average response rate of 65% is appropriate for research. Whereas Roberts (2004) agrees with Johnson and Christensen and says that "The rule of thumb regarding an appropriate response rate is as follows: Below 50% there is no defense, below 60% is questionable but could be OK, you should try for 70% or above" (p. 140). Similarly, Babbie (1998) avers that "A response rate of 50% is adequate, 60% good, and 70% very good" (p. 262). At the same time, Borg and Gall (1989) state that response rates should be no less than 80%, so as not to affect the results of the study. As is evident from the above literature, there is no agreement among researchers in relation to appropriate response rates. However, it is very clear that the higher the response rate, the more credible and generalizable the results of the study will be.

The total number of returned, usable surveys was 525 out of 600 total questionnaires distributed during this study. As a result, an overall response rate of this study is 87.5%. Therefore, the researcher is confident that response rate for this study is more than adequate, regardless of whose perspective you consider.

Data Analysis

Once the survey administration was completed, the researcher electronically entered all survey data into a data set file and then cleaned up and analyzed the data. The researcher imported his data set into SPSS Statistical software. Then the researcher ran an analysis of descriptive statistics, including: mean, median, standard deviation, skew and kurtosis. After that, the researcher analyzed the data and determined whether it met the assumptions required for linear regression, including: independence, linearity, homoscedasticity, and normality of the error distribution. The researcher understood that

the collected data was better served if the researcher employed Poisson regression, which allows for a more accurate analysis of count variables. Therefore, the researcher verified that the data met the primary assumption of Poisson regression - that the outcome mean and the variance were equal. Finding a near perfect match between the two, the researcher was justified in his use of Poisson regression.

In order to answer the first research question," How does elementary school teachers' participation in PD activities differ according to their personal characteristics?" Poisson regression analysis was conducted to examine the relationship between teachers' participation in PD activities (Y) and gender (X_1), age (X_2), years of teaching experience (X_3), grade level of teaching assignment (X_4), and teachers' education level (X_5).

To answer the second research question, "What are the internal factors associated with teacher participation in PD activities? For example, how do teachers' attitudes toward professional development activities and teachers' self-efficacy influence their participation in PD activities?" Poisson regression analysis was conducted to examine the relationship between teachers' participation in PD activities (Y) and their attitudes to PD activities (X_6), and their self-efficacy (X_7); controlling for gender, age, years of teaching experience, grade level of teaching assignment, and teachers' education level.

In order to answer the third research question, "What are the external factors associated with teacher participation in PD activities? For instance, how do time, funding, principal influence, colleague influence, and school culture impact the participation of teachers in PD activities?" Poisson regression analysis was conducted to examine the relationship between teachers' participation in PD activities (Y) and time (X_8), funding (X_9), principal influence (X_{10}), colleague influence (X_{11}), school culture (X_{12});

controlling for gender, age, years of teaching experience, grade level of teaching assignment, and teachers' education level.

Limitations in the Research Method

There were two main limitations inherent in this research method. First, due to budgetary and time constraints, data were collected in only one district in Osmaniye, Turkey. Hence, the sample has limited generalizability to the greater population of elementary school teachers in Turkey. Second, because of the choice of research design (quantitative survey research method), the findings of this study may not be as in-depth as other more qualitative research approaches.

CHAPTER IV- RESEARCH FINDINGS

Introduction

The purpose of this study was to examine the relationship between internal (personal) factors and external (environmental) factors and teachers' participation in PD programs in Turkey. Further, the study sought to explore whether the background of teachers such as gender, age, years of teaching experience, grade level of teaching assignment, and education level predict teachers' participation in PD activities. The study answered the following research questions.

1. How does elementary school teachers' participation in PD activities differ according to their personal characteristics?
2. What are the internal factors associated with teacher participation in PD activities? For example, how do teachers' attitudes toward professional development activities and self-efficacy influence their participation in PD activities?
3. What are the external factors associated with teacher participation in PD activities? For instance, how do time, funding, principal influence, colleague influence, and school culture impact the participation of teachers in PD activities?

The following hypotheses, based on prior research, were tested in this study:

H1.Young, new, female elementary school teachers participate in more PD activities than older, experienced, male teachers.

H2. A positive relationship exists between teachers' attitudes toward professional development activities and their participation in PD activities.

H3. A positive relationship exists between teachers' self-efficacy and their participation in PD activities.

H4. There is a positive relationship between time and teachers' participation in PD activities.

H5. There is a positive relationship between funding and teachers' participation in PD activities.

H6. There is a positive relationship between supportive principals and teachers' participation in PD activities.

H7. There is a positive relationship between supportive colleagues and teachers' participation in PD activities.

H8. There is a positive relationship between teacher perceptions of a positive school culture and participation in PD activities.

Personal Characteristics of Sample

The sample was chosen from a randomly selected group of teachers working in elementary schools in Osmaniye, Turkey during the 2011-2012 academic year. A descriptive comparison of the key characteristics of the sample to the whole teacher population in Osmaniye is presented in the Table 4.1. The total number of teachers in the sample was 600 (36% of the total elementary teacher population).

In the sample, 49% of the participants were female teachers and 51% were male. Like the population of elementary school teachers in the City Center of Osmaniye, the percentage of female and male teachers is almost equal in the sample. Therefore, the

sample reflects the distribution of teachers both in Osmaniye and in Turkish society in general.

Of the teachers surveyed, 13.8 % of the sample indicated that they were younger than 30 years old. This is not uncommon for teachers working in the city center of any Turkish city, since finding a job in a city center is very difficult for novice teachers. As a result, beginning teachers mostly work in districts outside the city center, and then after having gained some experience, they are able to transfer to the city center. Similarly, only 10.3% of teachers surveyed indicated that they had 5 or fewer years of teaching experience; with more than a quarter of teachers (27.8% of the sample) in this study indicating that they had more than 20 years teaching experience.

In terms of the grade level of teaching assignment, while the percentage of 1st grade teachers was slightly greater than that other grade levels, the remaining teachers represented 2nd through 8th grades, with a balanced distribution, as shown in Table 4.1, and reflected the greater population of elementary school teachers in the city center of Osmaniye.

When breaking down the sample according to education level, the researcher found no participants indicating that they had earned less than a high school diploma or any as high as a doctorate degree. A minute percentage (2.1%) of the teachers indicated having only a high school diploma. Less than a fifth of the participant teachers (18.2 %) indicated having an associate's degree. The majority of teachers (77.2% of the sample) indicated having earned a bachelor's degree; while the remaining 2.5% of teachers indicated having earned a master's degree. As shown in Table 4.1, the breakdown for the sample is very similar to the overall population of teachers employed in the city center of

Osmaniye. The small percentage of teachers with Master's degree or higher may be due in part to the fact that teaching positions in Turkey are tenured; therefore, teachers do not have to renew their certification and/or attend graduate school in order to keep their jobs. Additionally, even though a university is located in Osmaniye (Korkutata University), there is no college of education at this university. Hence there are no graduate school opportunities in education for teachers in Osmaniye. While there are education programs at some universities near Osmaniye, teachers often struggle with lack of time or financial resources to pursue their education in graduate school. An additional factor affecting the average amount of education held by these teachers dates back to Turkish policies in the 1980s and 1990s regarding the requirements necessary for becoming a teacher. Due to a shortage of teachers in Turkey, the Ministry of National Education (MONE) was forced to adopt some drastic measures in their hiring process. During this time educational policies allowed for teachers with high school diplomas or associate's degrees to be hired. These teachers, like their other more experienced peers, were granted tenure; resulting in them having life-long jobs. Hence, while they may be the exception rather than the rule, there are some teachers in Turkish schools who have only high school diplomas or associate's degrees.

Overall, the sample is relatively representative of the wider population of elementary teachers in the city center of Osmaniye with regard to age, gender, years of teaching experience, grade level of teaching assignment, and education level.

Table 4.1

Key Characteristics of the Sample and the Whole Elementary School Teacher Population in the City Center of Osmaniye

	Teacher Sample		Total Population [1,2]	
	Number	Percent	Number	Percent
Variable				
Gender				
Female	294	49%	825	49%
Male	306	51%	865	51%
Total	600	100%	1690	100 %
Age				
Under 25	12	2%	n/a	n/a
25 to 29	71	11.8%	n/a	n/a
30 to 39	265	44.2%	n/a	n/a
40 to 49	178	29.7%	n/a	n/a
50 to 59	57	9.5%	n/a	n/a
60 and more	17	2.8%	n/a	n/a
Total	600	100%	1690	100%
Teaching experience				
1-2 years	20	3.3%	n/a	n/a
3-5 years	42	7%	n/a	n/a
6-10 years	118	19.7%	n/a	n/a
11-15 years	124	20.1%	n/a	n/a
16-20 years	129	21.5%	n/a	n/a
More than 20 years	167	27.8%	n/a	n/a
Total	600	100%	1690	100%
Grade level				
1st grade	96	16%	236	14%
2nd grade	73	12.1%	220	13%
3rd grade	75	12.5%	220	13%
4th grade	69	11.5%	203	12%

5th grade	69	11.5%	203	12%
6th-8th grade	218	36.3%	608	36%
Total	600	100%	1690	100%
Education level				
Less than high school diploma	0	0%	0	0%
High school diploma	13	2.1%	51	3%
Associate's degree	109	18.2%	338	20%
Bachelor's degree	463	77.2%	1250	76%
Master's degree	15	2.5%	51	3%
Doctorate degree	0	0%	0	0%
Total	600	100%	1690	100%

Note 1: Data derived from http://osmaniye.meb.gov.tr/dosya/il_geneli_istatistik.pdf
Note 2: Data derived from www.osmaniye.meb.gov.tr
n/a = not available

The Distribution of the Dependent Variable

Before answering the research questions, the researcher ran descriptive statistics of the dependent variable (Number of PD activities) in order to better understand the distribution of this outcome variable. Table 4.2 provides a summary of the descriptives related to the number of PD activities for this study. It indicates that the average of number of PD activities attended by the participants in this study is 4.46 activities. Also, the range of participation in PD activities is 9, with participants attending as many as 9 activities or as few as none. In other words, while the Directorate of National Education (DONE) offered 11 regularly scheduled PD activities of the 12 months prior to the study, none the 525 participants in the study attended more than 9 of these opportunities.

Table 4.2

Descriptive Statistics of Number of Professional Development Activities

Variable	Mean (Number of PD activities)	Variance	SD	Range (The Number of PD activities across each characteristics) Minimum	Maximum	Skewness	Kurtosis	N
Number of PD activities	4.46	4.421	2.103	0	9	-.537	016	525

The Decision to Use Poisson Regression

When performing any linear regression, it is important to start by looking at your descriptives and determining whether or not your data meet the assumptions of the model being employed. After looking at the descriptives for the dependent variable, the number of times teachers participated in PD activities over the prior year, the researcher quickly discovered that short of log-transforming the data and analyzing it using OLS regression, the data were better served, and would be more accurately analyzed, using Poisson Regression. Poisson regression is a popular means of analysis when considering data employing count variables (http://www.statsref.com/HTML/index.html?poisson_regression.html); as is the case with the dependent variable in this study. The main assumption dictated in Poisson regression states that in a proper fitting model, the mean and variance of the outcome variable would be equal. The researcher recognized that the mean (4.46) and variance (4.42) of his outcome variable were almost equal (See Appendix, 10). Barring any other glaring

indicators of a poorly fitting model, Poisson regression seemed to be the best choice for the researcher to employ for the accurate analysis of the data collected in the study.

The Relationship of Teachers' Personal Characteristics to Their Participation in Professional Development Activities

In order to answer Research Question 1, which examined "How does elementary school teachers' participation in PD activities differ according to their personal characteristics?" the researcher used descriptive statistics and Poisson regression. Table 4.3 presents a summary of teachers' personal characteristics.

The researcher visited 30 elementary schools and invited 600 teachers to participate in the survey; 550 of those invited (91.6 %) opted to participate. After accounting for missing and/or incomplete surveys, the data from 525 teacher surveys (87.5%) was analyzed. As can be seen below in Table 4.3, descriptive statistics were used to better understand the personal characteristics of the participants.

Table 4.3

Summary of Professional Development Activities across the Participants' Characteristics

Variable	The Mean (Number of PD Activities)	SD	The Range (The Number of PD activities across each characteristics) (Minimum)	(Maximum)	N	Percent %	Cumulative Percent
Gender [1]							
Male	4.58	2.167	0	9	261	49.7%	49.7%
Female	4.34	2.033	0	9	264	50.3%	100%
Total	4.46	2.103	0	9	525	100%	
Age [2]							
Under 25	5.14	.690	4	6	7	1.3%	1.3%
25 to 29	3.93	2.295	0	8	56	10.7%	12.0%
30 to 39	4.40	2.135	0	9	240	45.7%	57.7%
40 to 49	4.43	2.131	0	9	165	31.4%	89.1%
50 to 59	5.25	1.550	1	8	57	10.9%	100.0%
60 and more	0	0	0	0	0	0%	100.0%
Total	4.46	2.103	0	9	525	100.0%	
Teaching experience [3]							
1-2 years	4.12	1.455	0	6	16	3.0%	3.0%
3-5 years	4.14	2.270	0	8	36	6.9%	9.9%
6-10 years	4.33	2.211	0	9	118	22.5%	32.4%
11-15 years	4.48	2.139	0	9	130	24.8%	57.1%
16-20 years	4.61	1.800	0	8	79	15.0%	72.2%
More than 20 years	4.58	2.162	0	9	146	27.8%	100.0%

Total	4.46	2.103	0	9	525	100.0%	
Grade level [4]							
1st grade	4.80	2.024	0	9	96	18.3%	18.3%
2nd grade	4.75	2.252	0	9	53	10.1%	28.4%
3rd grade	4.31	2.379	0	9	55	10.5%	38.9%
4th grade	4.16	2.239	0	8	49	9.3%	48.2%
5th grade	4.19	1.924	0	9	54	10.3%	58.5%
6th-8th grade	4.41	2.030	0	9	218	41.5%	100.0%
Total	4.46	2.103	0	9	525	100.0%	
Education level [5]							
High school diploma	0	0	0	0	0	0%	0%
Associate's degree	4.59	2.341	0	9	69	13.1%	13.1%
Bachelor's degree	4.41	2.082	0	9	441	84.0%	97.1%
Master's degree	5.20	1.373	2	8	15	2.9%	100.0%
Doctorate degree	0	0	0	0	0	0%	100.0%
Total	4.46	2.103	0	9	525	100%	

Note: SD = Standard Deviation.
1. Gender: 0= Male; 1 = Female.
2. Age: 1 = under 25; 2 = 25-29; 3 = 30-39; 4 = 40-49; 5 =50-59; 6 = 60 and more.
3. Teaching experience: 1 = 1-2 years; 2 = 3-5 years; 3 = 6-10 years; 4 = 11-15 years; 5 = 16-20 years; 6 = More than 20 years.
4. Grade level: 1 = 1st grade; 2 = 2nd grade; 3 = 3rd grade; 4 = 4th grade; 5 = 5th grade; 6 = 6th-8th grades.
5. Educational level: 1 = Less than high school diploma; 2 = High school diploma; 3 = Associate's degree; 4 = Bachelor's degree; 5 = Master's degree; 6 = Doctorate degree.

Of the 525 participants who completed the survey, 49.7% were male and 50.3% were female. The slightly higher number of female participants might reflect a greater willingness on the part of female teachers to participate in the study as compared with the

willingness of their male counterparts. Interestingly, the average participation in PD activities for male teachers surveyed (mean = 4.58 activities) was both greater than that for female teachers surveyed (mean = 4.34 activities); and the male mean exceeded the total mean (mean = 4. 46 activities) for all survey participants in regards to participation in PD activities over the last 12 months. An explanation for the greater male participation rates might stem from the fact that female teachers tend to have additional responsibilities at home that their male counterparts do not; since in Turkish society women are expected to care for the children, clean and cook regardless of whether they work outside the home. This will be further addressed in the analysis of the time factor.

According to the data, age was distributed in the following way across the sample: the largest percentage of teachers participating in PD activities fell into the 50-59 year old age group; with participants in this group participating no fewer than once and no more often than 8 times over the last 12 months (mean = 5.25 activities). The second most active group was the under 25 group, who were shown to have participated in PD activities no fewer than 4 times and no more often than 6 times over the last 12 months (mean = 5.14 activities). This group was followed by the 25 – 29 year olds, who participated less frequently than all other teachers' age groups; with some participants in this group failing to participate, while others participated as frequently as 9 times over the last 12 months (mean = 3.93 activities). A possible explanation for the lower attendance for this group might be due to either negative biases held toward PD activities based on previous experience or time availability limitations that arise from the need to tend to young children. The 30-39 year olds (mean = 4.40 activities) and the 40-49 year olds (mean = 4.43 activities) showed approximately the same patterns for participation in PD

activities, with participation ranging from 0 times for some or up to 9 times for others. Additionally, while the researcher invited 17 teachers from the 60+ age group, none of them chose to participate in the survey. Therefore, the researcher has no findings related to this group.

According to the data, teaching experience is slightly, negatively skewed. While the participation rates of teachers in PD activities tend to increase according to teaching experience for those teachers having between 1 and 20 years' experience, the rate of participation begins to slightly decrease for teachers indicating 20+ years of experience. Additionally, the researcher discovered that while teachers in their first 5 years of teaching participate on average 4.13 times in PD activities, some of the teachers in their first two years of experience indicated having participated up to 6 times in PD activities. While more experienced teachers participated an average of 4.50 times in PD activities, none of this group participated more than 9 times over the last 12 months. This data suggests a positive relationship between teaching experience and participation in PD activities, with Table 4.3, clearly reflecting that as teachers' experience increases, the participation rates of teachers in PD activities also increases.

According to the data, the grade level of teaching assignment was bimodally* distributed. (*Bimodal: a description of a distribution of observations that has two modes, Fields, 2005, p. 724). The data indicated 1st grade teachers participated in PD activities an average of 4.8 times over the past 12 months. The average participation in PD activities for 2nd grade teachers was 4.75 times, which was greater than the average participation for teachers assigned to teach grades 3-8. Higher participation rates by 1st and 2nd grade teachers might stem from the fact that these teachers feel a greater need for continuous

PD, and/or they demonstrate greater motivation to participate in PD activities. What is more, the participation average steadily decreases as grade level increases starting in 1st grade and doesn't start to increase again until 5th grade and the participation rates of 6th, 7th, and 8th grades teachers (mean = 4.41 activities) was found to be only slightly less than the average across all teachers (mean = 4.46 activities).

The breakdown for teachers' level of education was interesting, and for those unfamiliar with the history of Turkey's teacher shortage in the 1980s and 1990s somewhat shocking. 13 of the teachers sampled had only high school diplomas; coincidentally, none of them chose to participate in the study. Their lack of interest in the study might be attributable to a lack of confidence or self-efficacy to participate in the study. Another interesting finding related to teachers at the other end of the spectrum; teachers with Master's degree proved more willing to participate in PD activities (mean = 5.20 activities). Moreover, these teachers routinely participated in at least 2 PD activities in the last 12 months. It is interesting to note that the participation rate of teachers with Associate's degrees (mean = 4.59 activities) was higher than the participation rate of the teachers with Bachelor's degrees (mean = 4.41 activities). A reason for this difference might stem from the fact that as these teachers with less formal training participate in more PD activities, their confidence and sense of teaching efficacy might grow; or a potential dissatisfaction, resulting from limited formal training, might drive these teachers to seek further preparation.

In addition to examining the descriptive statistics, the researcher analyzed the data using Poisson regression to examine how elementary school teachers' participation in PD activities differs according to their personal characteristics. During the process, the

researcher transformed the categorical variables by creating dummy variables for each of the personal characteristics other than *gender***.** For *teachers' age*, since participants only responded in five out of the six available categories, four dummy variables were created with the '50-59' age group serving as the base or reference category against which the other categories were compared. For *teachers' experience,* since participants responded in all six of the provided categories, five dummy variables were created, with 'More than 20 years' serving as the reference category against which the other categories were compared. For *grade level* of teaching assignment, since participants responded in all six of the provided categories, five dummy variables were created, with '6^{th} through 8^{th} grades' serving as the reference category against which the other categories were compared. For *teachers' education level*, since participants only responded in three out of the six categories, two dummy variables were created, with 'Master's Degree' serving as the reference category against which the other categories were compared.

An analysis of Poisson regression was carried out to ascertain the extent to which gender, age, teaching experience, grade level of teaching assignment, and teachers' education level can predict the amount of teachers' PD participation. The Omnibus Test (Table 4.4) shows that the model for personal characteristics alone is not statistically significant (p=155). The Poisson regression data are summarized in Tables 4.5 and 4.6.

Table 4.4.

Omnibus Test[a]

Likelihood Ratio Chi-Square	Df	Sig.
22.824	17	.155

Dependent Variable: number of PD activities
Model: (Intercept), gender, age, years of teaching experience, grade level of assignment, education level[a]
a. Compares the fitted model against the intercept-only model.

Table 4.5.

Tests of Model Effects

Variable	Wald Chi-Square	Df	Sig.
(Intercept)	683.702	1	.000
Gender	.367	1	.545
Age	11.289	4	.023*
Teaching experience	2.642	5	.755
Grade level of assignment	5.186	5	.394
Education level	1.651	2	.438

Dependent Variable: number of PD activities
Model: (Intercept), Gender, Age, Teaching experience, Grade level of teaching assignment, Education level
* $p<.05$

Table 4.6

Regression of Teacher Participation in PD activities on Gender, Age, Teaching Experience, Grade Level of Teaching Assignment, and Teachers' Education Level Coefficients[a]

	B	SE	Exp(B)	Sig.
(Intercept)	1.772	.1355	5.884	.000
Gender (females versus males)	.107	.191	1.027	.545
Age				
Under 25 years old	-.020	.2269	.980	.929
25-29 years old	-.357	.1375	.700	.009*
30-39 years old	-.266	.1061	.766	.012*
40-49 years old	-.200	.0747	.819	.008*
50-59 years old (reference)	-			
Teaching experience				
1-2 years	-.040	.1748	.961	.819
3-5 years	.073	.1360	1.076	.591
6-10 years	.107	.1069	1.113	.316
11-15 years	.108	.0934	1.114	.250
16-20 years	.082	.0763	.0763	.281
More than 20 years (reference)	-			
Grade level				
1st grade	.080	.0589	1.084	.172
2nd grade	.060	.0741	1.062	.420
3rd grade	-.024	.0745	.976	.749
4th grade	-.070	.0823	.932	.394
5th grade	-.048	.0783	.953	.542
6th through 8th grades (reference)	-			
Education level				
Associates degree	-.145	.1358	.865	.287
Bachelor's degree	-.151	.1177	.860	.199
Master's Degree (reference)	-			

a. Dependent Variable: number of PD activities
* $p<.05$

Table 4.5 shows that gender, teaching experience, grade level of teaching assignment, and teachers' education level are not statistically significant (at a *p* value of .05) after controlling for all variables in the regression. Thus, on average, there is no difference statistically in participation in PD activities among teachers regardless of gender, amount of experience, assigned grade level, and level of education attained.

On the other hand, the model does point to age as being statistically significant after having controlled for the other variables in the regression. On average *age*, according to Table 4.5, shows a statistically significant ($p<.05$) difference in participation in PD activities among teachers. Additionally, according to Table 4.6, using the 50-59 year old age group as our reference category, the researcher found age to be statistically significant for all age groups except the under 25 year olds in determining teacher participation in PD activities over the past 12 months. The model shows that 25-29 year old teachers participate in PD activities .357 fewer times on average, and 30-39 years old teachers participate in PD activities .266 fewer times on average; while 40-49 years old teachers participate in PD activities .200 fewer times on average than 50-59 years old teachers (reference) after controlling for gender, grade level of teaching assignment, teaching experience, and teachers' education level. The results indicate that there is a positive relationship between age and teacher participation in PD activities. In other words, as teachers' age increases, the participation of teachers in PD activities also increases in this study.

The Relationship between Internal Factors (Teacher Attitudes and Self-Efficacy) and Teachers' Participation in Professional Development Activities

In order to answer the second research question, "What are the internal factors associated with teacher participation in PD activities?" the researcher analyzed the data using descriptive statistics and Poisson regression. Table 4.7 presents a summary of all variables' means and standard deviations. Responses to survey questions regarding teacher attitudes towards PD activities ranged from *strongly disagree* (1) to *strongly agree* (5) on each teacher attitude statement. The mean for the teachers sampled was 3.87, representing a response between unsure and agree in attitudes toward PD activities. This finding indicated that the sampled Turkish elementary school teachers tended to have positive attitudes towards professional development activities.

Responses to survey questions regarding self-efficacy of teachers, ranged from *strongly disagree* (1) to *strongly agree* (5) on each self-efficacy statement. The mean for the teachers sampled was 4.31, representing a response between agree and strongly agree. This finding indicated that the sampled Turkish elementary school teachers tended to have a strong sense of self-efficacy as it relates to their job.

Table 4.7

Summary of the Entire Variables' Mean and Standard Deviation

Variable	Mean	SD	Minimum	Maximum
Teacher Attitudes[1]	3.87	1.082	1	5
Self-Efficacy[2]	4.31	.527	1	5

Note: SD = Standard Deviation; N (Sample Size) = 525.
1. Teacher Attitudes is based on 6 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.
2. Self-Efficacy is based on 5 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.

A Poisson regression was carried out to ascertain the extent to which teachers' attitudes toward professional development activities and teachers' self-efficacy could predict their participation in professional development activities. The Omnibus Test (Table 4.8) shows that the model is suitable for predicting the outcome. In other words, the model is statistically significant (p<.000). The regression data are summarized in Table 4. 9 and pictorially represented in Figure 4.1.

Table 4.8.

Omnibus Test[a]

Likelihood Ratio Chi-Square	Df	Sig.
537.894	2	.000*

Dependent Variable: number of PD activities
Model: (Intercept), Teacher Attitudes, Self-Efficacy[a]
a. Compares the fitted model against the intercept-only model.

Table 4.9

Regression of Teacher Participation in PD activities on Teacher Attitudes and Self-Efficacy Coefficients[a]

	B	SE	Exp(B)	Sig.
(Intercept)	-1.228	.2207	.293	.000
Teacher Attitudes	.646	.0354	1.908	.000*
Self-Efficacy	.012	.0432	1.012	.788

a. Dependent Variable: number of PD activities
* p<.05

The Coefficients table (Table 4.9) shows that while *teacher attitudes* is statistically significant (p<.000), *self-efficacy* is not statistically significant (p >.05) in relation to teachers' participation in PD activities after controlling for all other variables in the model. Furthermore, the model shows that *teacher attitudes* produced a strong relationship (β= .646, p < .000) to teachers' participation in PD activities. In other words, as teacher attitudes increases by 1 unit, the natural log of the number of activities teachers participate in is expected to increase by 0.646, holding all other variables in the model constant.

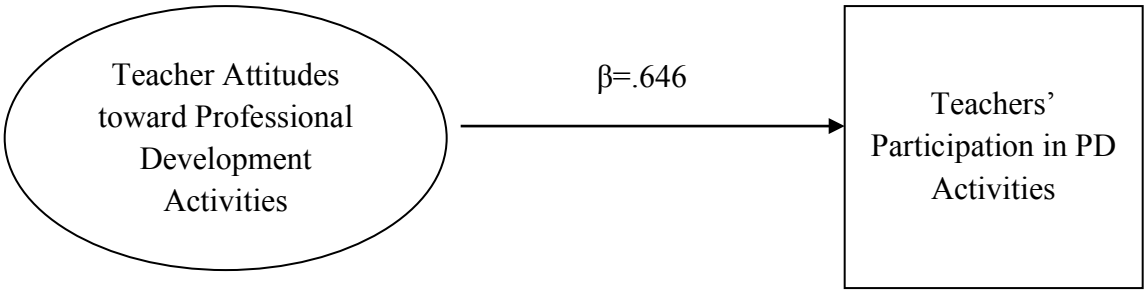


Figure 4.1. Conceptual diagram of the relationship of internal factors (teacher attitudes toward professional development activities) with teachers' participation in PD activities.

The findings above clearly support hypotheses H2, reflecting a positive relationship between teachers' attitudes toward professional development activities and participation in PD activities. This suggests that as teachers' attitudes toward professional development activities become more positive, they are more likely to participate in PD activities in Turkey. In addition, the findings above failed to support hypotheses H3.The

data suggest that there is no statistically significant relationship between teachers' self-efficacy and their participation in PD activities. Additionally this implies that teachers' participation in PD activities in Turkey does not depend on their self-efficacy.

The Relationship between External Factors (Time, Funding, Principal Influence, Colleague Influence, School Culture) and Teachers' Participation in Professional Development Activities

In order to answer the final research question, "What are the external factors associated with teacher participation in PD activities? For instance, "How do time, funding, principal influence, colleague influence, and school culture impact the participation of teachers in PD activities?" the researcher analyzed the data using descriptive statistics and Poisson regression. Table 4.10 presents a summary of all variables' means and standard deviations.

Responses to survey questions regarding the time variable, ranged from *strongly disagree* (1) to *strongly agree* (5) for each time statement. The mean for the teachers sampled was 3.55 for time, representing a response between not sure and agree. This finding indicated that the sampled Turkish elementary school teachers tended to agree that time is an important factor related to their participation in professional development activities in Turkey.

Responses to survey questions regarding funding, ranged from *strongly disagree* (1) to *strongly agree* (5) for each funding statement. The mean for the teachers sampled was 3.55 for funding, representing a response between not sure and agree. This finding indicated that the sampled Turkish elementary school teachers tended to agree that

funding is another important factor for their participation in professional development activities.

Responses to survey questions regarding principal influence, ranged from *strongly disagree* (1) to *strongly agree* (5) for each principal influence statement. The mean for the teachers sampled was 3.44 for principal influence, representing a response between not sure and agree. This finding indicated that the sampled Turkish elementary school teachers tended to agree that principal influence is another important factor for their participation in professional development activities.

Responses to survey questions regarding colleague influence, ranged from *strongly disagree* (1) to *strongly agree* (5) for each colleague influence statement. The mean for the teachers sampled was 3.48 for colleague influence, representing a response between not sure and agree. This finding indicated that on average the sampled Turkish elementary school teachers tended to believe that colleague influence affects their participation in professional development activities.

Responses to survey questions regarding school culture, ranged from *strongly disagree* (1) to *strongly agree* (5) for each school culture statement. The mean for the teachers sampled was 3.86 for school culture, representing a response between not sure and agree. This finding indicated that the sampled Turkish elementary school teachers tended to agree that school culture affects their participation in professional development activities.

Table 4.10

Summary of the Entire Variables' Mean and Standard Deviation

Variable	Mean	SD	Minimum	Maximum
Time[1]	3.55	.707	1	5
Funding[2]	3.55	.758	1	5
Principal Influence[3]	3.44	.832	1	5
Colleague Influence[4]	3.48	.704	1	5
School Culture[5]	3.86	.645	1	5

Note: SD = Standard Deviation; N (Sample Size) = 525.
1. Time is based on 5 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.
2. Funding is based on 5 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.
3. Principal Influence is based on 5 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.
4. Colleague Influence is based on 5 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.
5. School Culture is based on 5 items described in Table 3.2. Each are coded 1-5 on a Likert scale. 1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree.

A Poisson regression was performed to ascertain the extent to which time, funding, principal influence, colleague influence, and school culture can predict teachers' participation in professional development activities. The Omnibus Test (Table 4.11) shows that the model is suitable for predicting the outcome. In other words, the model is statistically significant (p<.000). The regression data are summarized in Table 4.12 and pictorially represented in Figure 4.2.

Table 4.11.

Omnibus Test[a]

Likelihood Ratio Chi-Square	Df	Sig.
180.806	5	.000

Dependent Variable: number of PD activities
Model: (Intercept), Time, Funding, Principal Influence, Colleague Influence, School Culture[a]
a. Compares the fitted model against the intercept-only model.

Table 4.12

Regression of Teacher Participation in PD activities on Time, Funding, Principal Influence, Colleague Influence, and School Culture Coefficients[a]

	B	SE	Exp(B)	Sig.
(Intercept)	-.018	.1682	.982	.913
Time	.360	.0378	1.434	.000*
Funding	-.129	.0289	.879	.000*
Principal Influence	044	.0328	1.045	.181
Colleague Influence	.116	.0431	1.123	.007*
School Culture	.025	.0488	1.025	. 614

Dependent Variable: number of PD activities
* $p < .05$

The Coefficients table (Table 4.12) shows that *time, funding,* and *colleague influence* were statistically significant ($p < .05$) in relation to teachers' participation in PD activities after controlling for the other variables in the regression model. On the other hand, *principal influence* and *school culture* were found not to be statistically significant in relation to teachers' participation in PD activities after controlling for all the other variables in the regression. Furthermore, *time* produced the strongest

relationship with teachers' participation in PD activities (β= .360, *p*<.000), followed by funding (β =.129, *p*<.000) and colleague influence (β = .116, *p*<.007). This means that as time increases by 1 unit, the natural log of the number of activities teachers participate in is expected to increase by 0.360, holding all other variables in the model constant. Also, as funding increases by 1 unit, the natural log of the number of activities teachers participate in is expected to decrease by 0.129, holding all other variables in the model constant. When colleague influence increases by 1 unit, the natural log of the number of activities teachers participate in is expected to increase by 0.116 holding all other variables in the model constant.

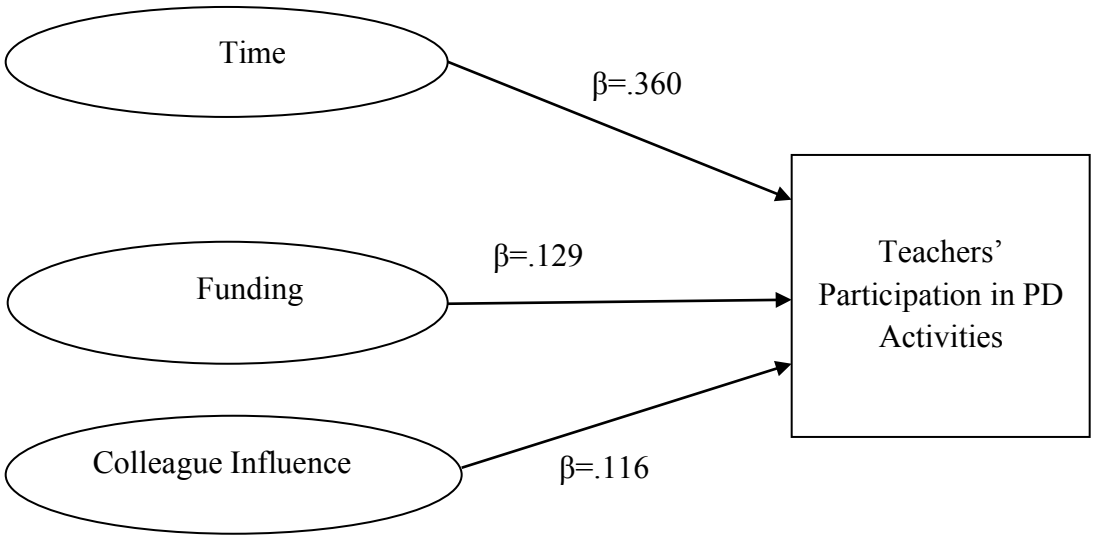


Figure 4.2 Conceptual diagram of the relationship of external factors (time, funding, and colleague influence) with teachers' participation in PD activities.

The findings above clearly indicate that a positive relationship exists between *time* and teachers' participation in PD activities. It means that as teachers have more free time, they are more likely to participate in PD activities in Turkey. Also, the findings

illustrate that there exist a negative relationship between funding and teachers' participation in PD activities, contrary to the researcher's hypothesis (H5) that there would be a positive relationship between funding and teachers' participation in PD activities. A potential explanation might be that teachers care more about whether or not the offered professional development activities are helpful for their own development than getting paid for participation in PD activities in Turkey. Also, they might believe that there is no need to get paid for participation in PD activities; when they need to participate in PD activities, they participate in them. The findings above also clearly showed that *principal influence* has little or no effect on teachers' participation in PD activities. This might be attributed to the fact that once teachers pass their certification exam to become teachers, they have life-long jobs; therefore principals exert very little power over teachers in schools in Turkey is limited. Additionally, the findings of this study undoubtedly demonstrate a positive relationship between supportive colleagues and teachers' participation in PD activities; meaning as teachers feel more supported by their colleagues, they are more likely to participate in PD activities in Turkey. Finally, the findings indicated that *school culture* has little or no effect on teachers' participation in PD activities. This might stem from the fact that teachers in Turkey traditionally have worked individually and autonomously.

Running All Variables Together

After analyzing the personal characteristics and internal and external variables separately in order to best answer the research questions in this study, the researcher was interested in learning what effect, if any, running all the variables together would have on the overall fit of the model – what factors are truly most relevant to teachers'

participation in PD activities? Therefore, the researcher ran all variables together and discovered the following results.

A Poisson regression was carried out to ascertain the extent to which *gender, age*, *teaching experience, grade level of teaching assignment, teachers' education level, teachers' attitudes toward professional development activities, teachers' self-efficacy, time, funding, principal influence, colleague influence, and school culture* could predict teacher participation in professional development activities. The Omnibus Test (Table 4.13) showed that the model is suitable for predicting the outcome. In other words, the model is statistically significant ($p<.000$). The regression data are summarized in Table 4.14 and Table 4.15.

Table 4.13.

Omnibus Test[a]

Likelihood Ratio Chi-Square	df	Sig.
546.229	24	.000

Dependent Variable: number of PD activities
Model: (Intercept), Gender, Age, Teaching experience, Grade level of assignment, Education level, Teacher Attitudes, Self-efficacy, Time, Funding, Principal influence, Colleague influence, School culture[a]
a. Compares the fitted model against the intercept-only model.

Table 4.14.

Tests of Model Effects

Variable	Wald Chi-Square	Df	Sig.
(Intercept)	25.047	1	.000
Gender	.172	1	.679
Age	.566	4	.967
Teaching experience	.884	5	.971
Grade level of assignment	1.192	5	.946
Education level	.495	2	.781
Teacher Attitudes	262.302	1	.000*
Self-Efficacy	.031	1	.860
Time	.620	1	.431
Funding	.360	1	.548
Principal Influence	.592	1	.442
Colleague Influence	.958	1	.328
School Culture	.095	1	.758

Dependent Variable: number of PD activities
Model: (Intercept), Gender, Age, Teaching experience, Grade level of teaching assignment, Education level, Teacher attitudes, Self-efficacy, Time, Funding, Principal influence, Colleague influence, School culture[a]
* $p<.05$

Table 4.15

Regression of Teacher Participation in PD activities on Gender, Age, Teaching Experience, Grade Level of Assignment, Education Level, Teacher Attitudes, Self-Efficacy, Time, Funding, Principal Influence, Colleague Influence, School Culture Coefficients[a]

	B	SE	Exp(B)	Sig.
(Intercept)	-1.231	.2843	.292	.000
Gender (females versus males)	-.019	.0448	.982	.679
Age				
Under 25 years old	.137	.2328	1.146	.557
25-29 years old	.013	.1387	1.013	.924
30-39 years old	.036	.1084	1.036	.743
40-49 years old	-.002	.0754	.998	.975
50-59 years old (reference)	-			
Teaching Experience				
1-2 years	-.129	.1803	.879	.474
3-5 years	-.046	.1384	.955	.742
6-10 years	-.073	.1102	.929	.505
11-15 years	-.051	.0964	.950	.598
16-20 years	.000	.0787	1.000	.997
More than 20 years (reference)	-			

Grade Level of Assignment				
1st grade	.047	.0594	1.048	.430
2nd grade	.048	.0762	1.049	.531
3rd grade	.051	.0756	1.053	.498
4th grade	-.008	.0830	.992	.920
5th grade	.018	.0795	1.018	.820
6th through 8th grades (reference)	-			
Education Level				
Associates degree	-.033	.1382	.968	.814
Bachelor's degree	-.067	.1187	.935	.573
Master's Degree (reference)	-			
Teacher Attitudes	.627	.0387	1.873	.000*
Self-Efficacy	-.008	.0472	.992	.860
Time	.033	.0424	1.034	.431
Funding	-.019	.0323	.981	.548
Principal Influence	.025	.0326	1.025	.442
Colleague Influence	.043	.0438	1.044	.328
School Culture	-.016	.0506	.985	.758

Dependent Variable: number of PD activities
* $p<.05$

It is interesting to note that once all of the variables are combined together in one model, as can be seen in the Coefficients table (Table 4.15), only teacher attitudes toward

professional development activities remains statistically significant (β= .627, $p < .000$) in relation to teachers' participation in PD activities. In other words, as teacher attitudes increase by 1 unit, the natural log of the number of activities teachers participate in is expected to increase by 0.627 holding all other variables in the model constant.

Summary of the Key Findings

In accordance with the research questions, the key findings were as follows:

First, the researcher found that Turkish teachers' personal characteristics, with the exception of their age, have little or no effect on their participation in professional development activities in Turkey.

Second, the researcher found that even though the teachers' attitudes toward professional development activities does have a positive effect on teachers' participation in PD activities, their own sense of self-efficacy has little or no effect on their participation in PD activities. It shows that of the internal factors, teachers' attitudes toward professional development activities are more important for participation in professional development activities.

Third, Turkish teachers brought to light that even though time, funding, and supportive colleagues affect their participation in professional development activities, principal influence and school culture have little or no effect on their participation in PD activities in Turkey. Teachers also reported that of the external factors, time is the most important factor for determining participation in PD activities.

Finally, after testing the personal characteristics and internal and external factors together in one model, the researcher came to the conclusion the most important single factor impacting teachers' participation in PD activities is teacher attitudes toward

professional development activities; found to be statistically significant ($\beta = .627$, $p < .000$) in relation to teachers' participation in PD activities.

CHAPTER V- DISCUSSION AND CONCLUSION

Introduction

In this chapter, the researcher will provide a summary of the study by reviewing the problem and restating the research questions. Subsequently, the researcher will identify the main methods and explain the population and sample used in the study. Then, the researcher will provide the reader with a summary and discussion of the results related to factors that affect teachers' participation in professional development activities in Turkey and how those factors compare and contrast with those identified in previous research. Afterwards, the researcher will discuss the limitations of the study and make recommendations for future research. Finally, the researcher will conclude the chapter by summarizing the importance and contribution of this study to the field and to the Turkish educational system.

Reviewing and Summarizing the Dissertation Research

The results of the Teaching and Learning International Survey (TALIS), conducted by the Organization for Economic Co-operation and Development (OECD) in 2009, showed that while teachers' rate of participation in PD activities in the 23 participating countries was 89% on average, the participation rate of Turkish teachers in PD activities was 74.8% within the 18 months prior to the survey. Furthermore, the TALIS reported that while Turkish lower secondary teachers spent an average of 11.2 days on PD, their contemporaries in the other participating countries averaged around 15.3 days for their PD across the same 18-month period. Consequently, this study sought

to explore the factors leading to the relatively low level of teacher participation in PD activities in Turkey. In order to address the problem examined in this study, the researcher clarified that the purpose of this study: to test the relationship between factors (internal [personal] and external [environmental]) and teachers' participation in PD programs in Turkey. To that end, this research addressed the following questions:

1. How does elementary school teachers' participation in PD activities differ according to their personal characteristics?
2. What are the internal factors associated with teacher participation in PD activities? For example, how do teachers' attitudes toward PD activities and self-efficacy influence their participation in PD activities?
3. What are the external factors associated with teacher participation in PD activities? For instance, how do time, funding, principal influence, colleague influence, and school culture impact the participation of teachers in PD activities?

The Methodology and Procedures

After a diligent search, the researcher was unable to find an appropriate, pre-validated instrument for this study; hence, the researcher developed a survey specifically designed to collect data on the factors under examination. The researcher utilized previous research, current terminology in the literature, and suggestions from the participants in the pilot study in developing the survey. The questionnaire employed close-ended questions and Likert-scale type answer choices for measuring the experiences and attitudes of teachers. The researcher used the following methods to examine the reliability of the questionnaire: 1) the researcher sought recommendations

from a panel review consisting of two professors, three graduate students, and three elementary school teachers; 2) the researcher employed the back-translation technique to ensure equivalent meaning between the Turkish and English versions of the questionnaire; and 3) the researcher implemented a pilot study; then analyzed the results using SPSS, version 16 to determine the corresponding Cronbach alpha of .74. The researcher used the following methods to determine the validity of the questionnaire: 1) the researcher generated a random list consisting of all of the items from the questionnaire; 2) the researcher asked the panel of reviewers to categorize these items in an effort to check the researcher's grouping and to examine the construct validity of the survey; 3) the researcher employed exploratory factor analysis (EFA) to ensure the validity of the survey; and 4) additionally, the researcher asked two professors in the field of education to review the survey items to evaluate the content validity of the survey.

Upon determining the reliability and validity of the questionnaire, the researcher developed the final iteration of the survey. Once the survey instrument was prepared, the researcher determined the participants in this study by using a multiple-stage sampling method. Due to limited access to every teacher in every elementary school in Osmaniye, the researcher focused his study on the elementary school teachers in the Center District. In the Center District of Osmaniye, there are 66 elementary schools and 1,690 elementary school teachers.

The researcher collected data during May and June of the 2011-2012 academic year. In order to provide individual teachers with an equitable chance of being selected, the researcher first randomly selected 30 out of the 66 elementary schools in the Center District of the province of Osmaniye. Then, the researcher invited all teachers present on

the day of the survey administration in the selected schools (about 20 teachers per school) to voluntarily complete the survey. Based on average school size, the sample size for this study was 600 teachers (assigned to grades 1 - 8) in the selected 30 elementary schools. While the goal for any researcher is 100% response rate, in this instance the researcher was hoping for a sample of no less than 400 elementary school teachers. To this end, 600 elementary school teachers were invited to complete the teacher questionnaire. Due to the voluntary nature of the study, some teachers (50 out of 600) either declined to participate or were not present on the day of survey administration. After accounting for missing and/or incomplete surveys, the response rate was 87.5 % (525 out of 600). This high response rate clearly showed that participation in professional development programs was an important issue for the sample population.

Even though the researcher had initially planned to combine "group administration" and "Internet survey" methods to collect the data in this study, the participants in the pilot study and Directorate of National Education (DONE) in Osmaniye strongly recommended a preference for "paper-based survey" over the "Internet survey". Therefore, the researcher acquiesced and with the help of family and friends, was able to provide the requisite number of paper-based surveys. On the day of each survey administration, the researcher personally visited each participating school and individually administered the paper-based survey utilizing "group administration" techniques during the teachers' daily planning period at the end of the school day. Once data collection was complete, the researcher analyzed the data via Poisson regression using SPSS Version 16.0 statistical software. The researcher considered the *p* value level of 0.05 to represent statistically significant results.

Major Findings and Discussion

Major findings were as follows:

1. **Characteristics of Teachers**

While no statistically significant relationship was found between gender, teaching experience, grade level of teaching assignment, education level of teachers and teachers' participation in professional development activities, there was a statistically significant relationship between a teacher's age and their participation in professional development activities. According to the analysis, there is a positive relationship between age and participation of teachers in PD activities. In other words, as age increases, the amount of teacher participation in PD activities increases.

These findings are contrary to the results of some previous studies. For instance, Bayindir (2009) found that the number of years of teaching experience negatively affected teachers' participation in professional development activities. Accordingly, as the number of years of teaching experience increases (especially after 10 years), teacher participation in PD activities dramatically decreases. In a similar vein, Ozer and Beycioglu (2010) found that gender and years of teaching experience affected teachers' participation in professional development activities. According to their research, female teachers are more likely to participate in PD activities than male teachers; and there is a negative relationship between the number of years of teaching experience and the amount of teacher participation in PD activities. Torff and Session (2008) found in their study that years of teaching experience and the grade level of the teaching assignment were important factors for teachers' participation in professional development activities.

According to them, the number of years of teaching experience has a negative effect on teachers; and elementary school teachers are *more* likely to participate in PD activities.

In spite of these contrary findings, this study was consistent with the study by Torff and Session, finding that although age affects teachers' participation, the level of educational attainment and gender do not affect teachers' participation in these activities.

2. Internal Factors

In this study, two internal factors (teacher attitude and self-efficacy) were examined in relation to whether they affect teachers' participation in PD activities. After analyzing the data using Poisson regression, the researcher found that:

a. Teachers' attitudes towards professional development activities: There was a statistically significant positive relationship between teachers' attitudes towards professional development activities and their participation in PD activities. In that vein, as teachers' attitudes towards professional development activities increase, the teachers' level of participation in professional development activities also increases. This finding corroborates previous research by Amos and Benton (1988), Ruberto (2003), Torff and Session (2008, 2009). Similar to this research study, these researchers found that a positive relationship exists between teachers' attitudes towards professional development activities and teachers' participation in professional development activities. Hence, teachers' attitudes toward professional development activities is one of the most important factors affecting teachers' participation in professional development activities.

b. Self-efficacy: A statistically significant relationship was not found between self-efficacy and teachers' participation in professional development activities. Simply stated, the participation of teachers in professional development activities does not depend on teachers' self-efficacy. This finding is inconsistent with the finding of Lohman (2006), who found that self-efficacy is one of the key factors influencing teachers' participation in learning (professional development) activities.

3. External Factors

In this study, 5 external factors (time, funding, principal influence, colleague influence, and school culture) were examined in relation to whether they affect teachers' participation in professional development activities. After analyzing the data using Poisson regression, the researcher found that:

a. ***Time:*** There was a statistically significant positive relationship between time and teachers' participation in PD activities. As teachers have more available time, they are more likely to participate in additional professional development activities. The findings indicated that teachers who reported having constraints on their time had lower participation rates. This finding is consistent with previous research. Similar to this study, other researchers have found that there is a strong relationship between time and the amount of teachers' participation in professional development activities. This in part makes *time* one of the most influential factors affecting teachers' participation in professional development activities (Collinson, 2000; Collinson & Cook, 2004; Demirtas, 2010; Easton, 2008; Guskey, 2003; Harris, Day, Goodall,

Lindsay, & Muijs, 2005; Hirsh, 2001; Hodkinson & Hodkinson, 2005; Klinger, 2004; Kwakman, 2003; Lohman, 2006; Postholm, 2011; Richardson, 2003; Rogers et al., 2007; Sandholtz & Scribner, 2006; Visser et al., 2010; van Woerkom, Nijhof, & Nieuwenhuis, 2002; Yamagata-Lynch & Haudenschild, 2009). Therefore, providing adequate time for professional development must be addressed if policy makers wish to increase teachers' participation in professional development activities (Corcoran, 1995; Villegas-Reimers, & Reimers, 2000).

b. ***Funding:*** There was a statistically significant negative relationship between funding and teachers' participation in professional development activities; which indicates that as funding increases, the amount of teachers' participation in professional development activities decreases. This finding is inconsistent with previous research in the literature. Previous scholars discovered a strong positive relationship between funding and teachers' participation in professional development activities; pointing to funding as one of the most important factors influencing teachers' participation in professional development activities (Easton, 2008; Hodkinson & Hodkinson, 2005; Leonard & Leonard, 2003; Lohman, 2006; Richardson, 1997; Shafer, 2009; Valentine, 1997; Yamagata-Lynch & Haudenschild, 2009). The reason for this inconsistency might stem from the cost of living in Osmaniye. While the salary for teachers living in Osmaniye affords a comfortable cost of living; the same salary might not provide as well for teachers in larger cities in Turkey, such as Istanbul, Ankara, and Izmir. Therefore, the participants in this

study might not care as much about money offered for professional development opportunities as would their peers teaching in larger cities in Turkey.

c. ***Principal influence:*** A statistically significant relationship was not found between principal influence and teachers' participation in professional development activities. This finding is contrary to previous research conducted in the US and Europe. In contrast with this study, previous researchers had found that a positive relationship exists between principal influence and teachers' participation in professional development activities; indicating that the principal is one of the most influential factors impacting teachers' participation in professional development activities (Collinson & Cook, 2000; Meister, 2010; Payne & Wolfson, 2000; Postholm, 2011; Sandholtz & Scribner, 2006). An explanation of this finding might be related to differences between the roles of principals in Turkey versus those in the US and Europe. Since teachers are guaranteed positions for life, once passing the qualifying certification exam and yearly evaluations by principals bear little weight in Turkey, the influence of Turkish principals may be somewhat limited as compared to their American and European counterparts, who have a say in the renewal of teachers' employment contracts. Consequently, the influence of principals in Turkey is not a statistically significant factor for teachers' participation in professional development activities.

d. ***Colleague influence:*** There was a statistically significant positive relationship between colleagues and teachers' participation in professional development

activities; indicating that as colleague influence increase, the level of teachers' participation in professional development also increases. This outcome might stem from the fact that teachers in Turkey tend to be very cliquish; i.e., they like to act together. Therefore, members of each clique affect one another. As a result, colleague influence is more important than principal and school culture for teachers' participation in professional development activities in Turkey. This finding is consistent with previous research, which held that there is a strong positive relationship between colleague influence and teachers' participation in professional development activities. Therefore, colleague influence is one of the vital factors affecting teachers' participation in professional development activities (Kontoghiorghes, 2001; Meister, 2010; Rosenholtz, Bassler, & Hoover-Dempsey, 1986; Senge, 2006; Tracey, Hinkin, Tannenbaum, & Mathieu, 2001).

e. ***School culture:*** There was no statistically significant relationship found between school culture and teachers' participation in professional development activities. This finding is also contrary to previous research conducted in the US and Europe. Unlike this research study, previous researchers have found there to be a strong positive relationship school culture and teachers' participation in professional development activities. Hence, school culture is one of the most important factors influencing teachers' participation in professional development activities (Day, 1999; Earley & Bubb, 2004; Kontoghiorghes, 2001; Lohman & Woolf, 2001; McLaughlin & Talbert, 2006; Opfer & Pedder, 2011; Pedder et al. 2005; Postholm, 2011;

Sandholtz & Scribner, 2006; Tracey et al., 2001). A possible explanation for this contradiction might be that teachers in Turkey are mostly isolated from their colleagues and an individualistic culture is dominant among teachers. In the U.S., in contrast, school culture effects are generally attributed to norms of collegiality and common goals. Thus, school culture in Turkey is not a statistically significant factor for teachers' participation in professional development activities.

4. Running All Variables Together

After separately analyzing the personal characteristics, the internal factors, and the external factors in an effort to answer the research questions for this study, the researcher wondered what would happen if he explored the impact of all factors on teacher participation in Turkey simultaneously. Therefore, the researcher ran all the variables together and discovered a statistically significant, positive relationship between teachers' attitudes towards professional development activities and their participation in PD activities. Consequently, this model resulted in no statistically significant relationship between all other variables and teachers' participation in professional development activities. This indicates that when teachers have positive attitudes towards professional development activities, all other variables have less of an influence on their decision to participate in professional development activities. Accordingly, as teachers' attitudes towards professional development activities increase, the teachers' level of participation in professional development activities also increases.

This finding is consistent with previous research that held that there is a strong positive relationship between teachers' attitudes towards professional development

activities and teachers' participation in professional development activities (Amos & Benton, 1988; Ruberto, 2003, Torff & Session, 2008; Torff & Session, 2009). Hence, when running all variables all together in one model, the researcher concluded that teachers' attitudes toward professional development activities are the single most important factor affecting teachers' participation in professional development activities.

Limitations of the Study and Some Recommendations for Future Research

There are a number of limitations that should be addressed in considering the results of the present study; including:

1. The researcher conducted this study in only one district of the province of Osmaniye. Failure to study the entire region or country reduces the generalizability of the findings.
2. The researcher conducted this study with only elementary school teachers. As such, the factors that affect elementary school teachers' participation in professional development activities might differ from those that affect high school teachers' participation in PD activities. Hence, the results of this study are limited to perceptions of elementary school teachers.
3. The researcher did not classify the participant schools based on their location, such as urban schools, rural schools, and so on. Rather, the researcher included different schools from different parts of the Center District of Osmaniye in order to accurately reflect variances due to location throughout the Center District.

4. Using a survey instrument offers another limitation of the study. While the researcher was able to collect data from 525 participants, the depth of information collected was limited.
5. Finally, surveys are self-report instruments, leaving the reliability of the responses open to question. The assumption is that all participants provide truthful and accurate information.

Based on the findings and limitations of this study, the researcher has the following recommendations for future research:

1. Further studies should be conducted in different cities and across Turkey in order to better generalize the results of the study.
2. Further studies should be conducted in high schools to understand how the determined factors affect high school teachers' participation in professional development activities.
3. Further studies should classify schools according to their location; as it would be interesting to discover if school location is a significant factor affecting teachers' participation in professional development activities.
4. Further studies should be conducted using qualitative or mixed method approaches in order to better understand the extent to which these factors affect teachers' participation in PD activities. Additionally, these methods speak to the veracity of participant responses by allowing for triangulation of data collection.
5. Insofar that there is no other study of this nature with Turkish teachers, replication of this study might strengthen its findings.

Recommendations

Based on the findings of this study, the researcher has the following recommendations for Directorate of National Education, Ministry of National Education, and policy makers:

1. It is imperative to find strategies to improve teachers' attitudes towards professional development activities. I personally believe that professional development activities must be related to teachers' needs; and after looking at the list of professional development activities offered, I wonder how effectively the current professional development offerings are meeting these needs? Therefore, I propose designing a future qualitative study focused on the perceive needs of teachers. Results from such a study might have greater influence on the design of future professional development offerings; consequently tapping into teacher interests and impacting teacher attitudes towards professional development activities.
2. More time should be made available for teachers to increase their participation in PD activities.
3. Additional funding should be spent on increasing the time teachers have for participation in PD activities rather than simply offering stipends for attendance.
4. Team building techniques should be implemented to improve relationships among teachers (colleagues).
5. The system might need to be revamped, so to allow principals greater influence over teachers in Turkish schools.

6. Strategies encouraging teachers to engage in a collaborative school environment should be implemented.

Conclusion

Although there are a variety of studies conducted to examine factors affecting participation of teachers in PD activities in the US, there are few such studies in the Turkish literature. Therefore, in this study, the researcher endeavored to examine how the determined factors in the US literature affect teachers' participation in PD activities in Turkey. The researcher hypothesized that personal characteristics of teachers (gender, age, teaching experience, grade level of teaching, and education level), internal factors (teachers' attitudes towards professional development activities and teachers' self-efficacy), and external factors (time, funding, principal influence, colleague influence, and school culture) might impact teachers' participation in PD activities. Through this exploratory process, the researcher hoped to contribute to the literature, and to encourage other researchers to conduct further studies related to the PD of teachers, especially in Turkey. The researcher, also, hoped that the results of this study would inform Turkish policy makers regarding strategies for increasing teacher participation rates in PD programs. Hence, the researcher personally believed that this study was extremely important for the future of Turkey, and hoped that it would have a potential positive impact on the participation rate of Turkish teachers in PD activities (and consequently impacting the achievement of Turkish students).

While the researcher found that age, teachers' attitudes towards professional development activities, time, funding, and colleague influence affect teachers' participation in professional development activities in statistically significant ways;

gender, teaching experience, grade level of teaching, education level, teachers' self-efficacy, principal, and school culture do not affect their participation in these activities.

It was interesting to note that even though principal and school culture are important factors for teachers' participation in PD activities in the US, they seem to have limited effect on teachers' participation in PD activities in Turkey. As mentioned previously, this might stem from different roles of principals in Turkish schools and a different interpretations and expectations of school culture in Turkish society.

The ongoing discussion regarding the caliber of teachers and their professional development remains a popular and relevant topic for debate among researchers, policy makers, and all other stakeholders in Turkish society; and provides plenty of opportunity for continued research. Therefore, educational policies in Turkey should focus on the statistically significant factors found in this study in order to motivate teachers to increase participation in professional development activities.

In conclusion, the researcher believes that more research needs to be conducted in the area of professional development of teachers in Turkey. The topic, the elements, and the results of this research study continue to be of utmost interest for the researcher. Hence, the researcher hopes to conduct similar studies related to this topic throughout Turkey employing either a mixed methods approach or a qualitative method approach upon graduating from the University of Missouri. After having graduated and having conducted additional studies, the researcher plans to continue to inform policy makers in an attempt to increase teachers' participation in PD activities in Turkey.

APPENDICES

1. Office of Research: Permission to Conduct Study Approval
2. The Official Permission Letter from Directorate of National Education (English Version)
3. The Official Permission Letter from Directorate of National Education (Turkish Version)
4. Consent Form for the Survey
5. The Cover Letter for the Survey
6. Teachers' Participation in Professional Development Programs Survey (English Version)
7. Teachers' Participation in Professional Development Programs Survey (Turkish Version)
8. Assumptions of Explanatory Factor Analysis
9. Construct Validity of the Survey

Appendix 1

Office of Research: Permission to Conduct Study Approval

Campus Institutional Review Board
University of Missouri-Columbia

485 McReynolds Hall
Columbia, MO 65211-1150
PHONE: (573) 882-9585
FAX: (573) 884-0663

May 2, 2012

Principal Investigator: Bayar, Adem
Department: Educational Leadership and Policy Analysis

Your Application to project entitled *Factors Affecting Teachers' Participation in Professional Development (PD) Activities in Turkey* was reviewed and approved by the MU Campus Institutional Review Board according to terms and conditions described below:

IRB Project Number	1202592
Initial Application Approval Date	May 2, 2012
IRB Expiration Date	May 2, 2013
Level of Review	Exempt
Project Status	Active - Open to Enrollment
Regulation	45 CFR 46.101b(2)
Risk Level	Minimal Risk

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the approval:

1. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date.
2. All unanticipated problems, serious adverse events, and deviations must be reported to the IRB within 5 days.
3. All modifications must be IRB approved by submitting the Exempt Amendment prior to implementation unless they are intended to reduce risk.
4. All recruitment materials and methods must be approved by the IRB prior to being used.
5. The Annual Exempt Certification Form must be submitted to the IRB for review and approval at least 30 days prior to the project expiration date.
6. Maintain all research records for a period of seven years from the project completion date.
7. Utilize the IRB stamped document informing subjects of the research and other approved research documents located within the document storage section of eIRB.

If you have any questions, please contact the Campus IRB at 573-882-9585 or umcresearchcirb@missouri.edu.

Thank you,

Charles Borduin, PhD
Campus IRB Chair

Appendix 2

The Official Permission Letter from Directorate of National Education

(English Version)

The Republic of Turkey
Ministry of National Education
Directorate of National Education,
Osmaniye

PERMISSION LETTER
FROM DIRECTORATE OF NATIONAL EDUCATION OF OSMANIYE

23 April 2012
Directorate of National Education of Osmaniye
Adnan Menderes Street Governor's Building Blocks L-M
80010 The Center District, Osmaniye, Turkey

Dear Members of the Committee:

On behalf of the Directorate of National Education of Osmaniye, I am writing to formally indicate my awareness of the research proposed by Mr. Adem Bayar, a doctoral student at University of Missouri-Columbia. I am aware that Mr. Bayar intends to conduct his research by administering a survey to the elementary school teachers in the Center District of Osmaniye from May 15 through June 15, 2012.

I am the director of National Education of Osmaniye and am in charge of teacher professional development. Please note that I give Mr. Bayar permission to conduct his research, "Factors Affecting Teachers' Participation in Professional Development Activities", with the elementary school teachers in the Center District of Osmaniye.

If you have any questions or concerns, please feel free to contact my office at +90 (328) 826 17 83.

Sincerely,

Fahri Çalık
Director of National Education of Osmaniye

Appendix 3

The Official Permission Letter from Directorate of National Education

(Turkish Version)

Türkiye Cumhuriyeti
Milli Eğitim Bakanlığı
Osmaniye İli Milli Eğitim
Müdürlüğü

Osmaniye İli Milli Eğitim Müdürlüğü İzin Mektubu

23 Nisan 2012
Osmaniye İli Milli Eğitim Müdürlüğü
Adnan Menderes Mahallesi Valilik Binasi L-M Blokları
80010 Merkez, Osmaniye, Türkiye

Değerli Komite Üyeleri:

Bu mektubu University of Missouri-Columbia'da doktora öğrenimine devam etmekte olan Adem Bayar'ın çalışmasından haberdar olduğumu bildirmek için Osmaniye İli Milli Eğitim Müdürlüğü adına yazmaktayım. Adem Bayar'ın Osmaniye ili Merkez ilçesi ilköğretim okullarında görev yapmakta olan öğretmenlere yönelik anket çalışmasını 15 Mayıs-15 Haziran, 2012 tarihleri arasında yapacağı bilgime sunulmuştur.

Osmaniye İli Milli Eğitim Müdürlüğü Hizmetiçi Eğitimi Birimi'nde yönetici olarak görev yapmaktayim. Sayın Bayar'a "Öğretmenlerin Hizmetiçi Eğitim Faaliyetlerine Katılımlarını Etkileyen Faktörler" adlı çalışmasında Osmaniye ili Merkez ilçesinde görev yapmakta olan ilköğretim okulu öğretmenleri ile çalışma yürütmesi tarafımızca uygun bulunmuş ve gerekli izin sağlanmıştır.

Çalışma ile ilgili soru ve/veya kaygılarınız için lütfen benimle +90 (328) 826 17 83 numaralı telefon aracılığıyla iletişim kurunuz.

Saygılarımla,

Fahri Çalık
Osmaniye İli Milli Eğitim Müdürlüğü Yöneticisi

Appendix 4

Consent Form for the Survey

College of Education

University of Missouri-Columbia

May 15, 2012

Factors Affecting Teachers' Participation in Professional Development Activities

You are being invited to participate in a research study about professional development of teachers. This research project is being conducted by Adem Bayar, from the Department of Educational Leadership and Policy Analysis of the University of Missouri-Columbia. The study is being conducted as part of his dissertation. The purpose of this research project is to understand the relationship between factors (internal [personal] and external [environmental]) and teachers' participation in professional development programs in Turkey. It is being conducted in over 22 elementary schools throughout the province of Osmaniye, Turkey. The survey is being given to current teachers of all of these elementary schools.

There are no known risks if you decide to participate in this research study, nor are there any costs for participating in the study. The information you provide will help me understand how factors affect teachers' participation in professional development activities. The survey will take about 15 minutes to complete. The information collected may not benefit you directly, but what I learn from this study should provide general benefits to teachers, policy makers, and researchers.

This survey is anonymous. If you choose to participate, do not write your name on the survey. In order to provide anonymity for this Internet survey, the researcher will not collect your IP address when you respond to the survey. No one will be able to identify you or your answers, nor will anyone be able to determine for which school you work. No one will know whether or not you participated in this study. Nothing you say on the survey will in any way influence your present or future employment with your school. The Institutional Review Board may inspect these records. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. You are free to decline to answer any particular question you do not wish to answer for any reason.

If you have any questions or concerns about completing the survey or about being in this study, you may contact me at +90 5437298688 or by email at ab4n3@mail.missouri.edu / adembayar80@gmail.com.

The University of Missouri-Columbia Institutional Review Board has reviewed my request to conduct this project. If you have any concerns about your rights in this study, please contact the University of Missouri-Columbia Institutional Review Board (IRB) by email at umcresearchcirb@missouri.edu or by phone at (573) 882-9585.

By beginning the survey, you acknowledge that you have read this information and agree to participate in this research, with the knowledge that you are free to withdraw your participation at any time without penalty.

Appendix 5

The Cover Letter for the Survey

College of Education

University of Missouri-Columbia

May 15, 2012

Dear Participant,

I am a doctoral student in the Educational Leadership and Policy Analysis Department at University of Missouri-Columbia and I am conducting a study of factors affecting teachers' participation in professional development activities. The purpose of this research project is to discover factors that influence teacher participation in professional development activities in the province of Osmaniye, Turkey. Through your participation, I eventually hope to understand what factors affect teachers' participation in professional development activities.

If you choose to participate, do not write your name on the survey. I do not need to know who you are and no one will know whether you participated in this study. Your responses will not be identified with you personally, nor will anyone be able to determine for which school you work. Nothing you say on the survey will in any way influence your present or future employment with your school.

I hope you will take a few minutes to complete this survey. Without the help of people like you, research on teachers could not be conducted. Your participation is voluntary and there is no penalty if you do not participate.

If you have any questions or concerns about completing the survey or about participating in this study, you may contact me at +90 5437298688 or by e-mail at ab4n3@mail.missouri.edu / adembayar80@gmail.com. You may also contact my doctoral advisor, with any concerns, Dr. Peggy Placier, at placierp@missouri.edu . If you have any questions about your rights as a research subject, you may contact the University of Missouri-Columbia Institutional Review Board (IRB) by email at umcresearchcirb@missouri.edu or by phone at (573) 882-9585.This study (IRB # 1202592) was approved by the IRB on May 2, 2012.

Sincerely,

Adem Bayar, PhD. candidate
Department of Educational Leadership and Policy Analysis
University of Missouri-Columbia

Appendix 6

Teachers' Participation in Professional Development Programs Survey

(English Version)

Teachers' Participation in Professional Development Programs Survey

Dear Elementary School Teachers:

I would like to invite you to participate in "Teachers' Participation in Professional Development Programs Survey". The purpose of this survey is to find out about your experiences in professional development activities within the last 12 months. I will use the information I gather to determine which factors affect your participation in professional development activities.

Your participation in this survey is voluntary. Your individual responses will remain strictly confidential and will never be shared with the principal of the school and superintendent of the district. The survey will take about 15 minutes to complete.

If you have any questions about this survey, please contact Adem Bayar at +90 5437298688 or by email at ab4n3@mail.missouri.edu / adembayar80@gmail.com.

Thanks so much for your participation.

1. **Background Information**
2. **Professional Development Programs**

Your Background

Q1. What is your gender? *Circle one number.*

Male……	1
Female……	2
Other……..	3

Q2. How old are you? *Circle one number.*

Under 25 ……	1
25-29……	2
30-39 ……..	3
40-49 ……..	4
50-59 ……..	5
60 or more ……..	6

Q3. How long have you been working as a teacher? *Circle one number.*

1-2 years	1
3-5 years	2
6-10 years	3
11-15 years	4
16-20 years	5
More than 20 years	6

Q4. What grade level do you teach? *Circle one number.*

1st grade	1
2nd grade	2
3rd grade	3
4th grade	4
5th grade	5
6th through 8th grades	6

Q5. What is the highest level of formal education you have completed?
Circle one number

Less Than High School Diploma	1
High School Diploma	2
Associate's Degree	3
Bachelor's Degree	4
Master's Degree	5
Doctoral Degree	6

Professional Development Programs

The following questions will ask you about your experience in professional development activities.

A **"professional development activity"** is defined as "any formal training organized by the government for a determined time and place in order to update and/or improve teachers' content and pedagogical content knowledge."

Q1. Based on the below list, please determine that how many professional development activities in total have you participated in the past 12 months?

Circle one number

Training for Environmental Compliance	☐
Training for Basic Education	☐
Training for Elementary Education Institutions	☐
Preparatory Education Program	☐
Course in computer and Internet use	☐
AutoCAD course	☐
Seminar on Emergency Medical Service	☐
Seminar on learning-leader teacher	☐
Erosion and environmental education seminar	☐
Seminar for nursing	☐
Seminar on Disaster and Emergency Preparedness	☐

None of them	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Q2. How much do you agree with the following statements about your attitudes toward professional development activities?

Circle one number for each item.

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1) Professional development activities are necessary for teachers.	1	2	3	4	5
2) Professional development activities help teachers to develop their instructional skills.	1	2	3	4	5
3) Professional development activities are valuable enough to justify the time spent.	1	2	3	4	5
4) Participating in professional development activities makes me feel better about myself.	1	2	3	4	5
5) The best way for teachers to learn more is to participate in professional development activities.	1	2	3	4	5
6) I enjoy participating in professional development activities.	1	2	3	4	5

3

Q3. To what extent do you agree with the following statements?

Circle one number for each item.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1) I am able to successfully teach all relevant subject content to my students.	1	2	3	4	5
2) When I try really hard, I can teach even the most difficult students.	1	2	3	4	5
3) I have enough ability to be responsive to my students' learning needs.	1	2	3	4	5
4) I can motivate my students to participate in learning activities.	1	2	3	4	5
5) I am already a good teacher.	1	2	3	4	5

Q4. How much do you agree with the following statements?

Circle one number for each item.

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	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1) The available professional development activities are scheduled at convenient times.	1	2	3	4	5
2) My colleagues encourage me to participate in professional development activities.	1	2	3	4	5
3) Lack of funding for additional personnel to cover classes prevents me from participating in professional development activities.	1	2	3	4	5
4) In my school we share the belief that teachers can learn to improve student achievement.	1	2	3	4	5
5) My principal encourages me to participate in professional development activities.	1	2	3	4	5
6) Salary supplements would encourage me to participate in professional development activities.	1	2	3	4	5
7) I have time to regularly attend offered professional development activities.	1	2	3	4	5
8) My colleagues and I share common values related to professional development activities.	1	2	3	4	5
9) My principal expects me to participate in professional development activities.	1	2	3	4	5
10) The working environment in my school is positive and supportive.	1	2	3	4	5

11) I would rather do extra-curricular activities for pay than participate in professional development activities.	1	2	3	4	5
12) In my school all of the staff agree on common values about student learning and teaching.	1	2	3	4	5
13) My principal provides resources for participation in professional development activities.	1	2	3	4	5
14) Our school goals are based on knowledge of our students' learning.	1	2	3	4	5
15) Family responsibilities make it difficult for me to participate in professional development activities beyond the work day.	1	2	3	4	5
16) My colleagues and I participate in professional development activities together.	1	2	3	4	5
17) Expenses for travel prevent me from participating in professional development activities.	1	2	3	4	5
18) My principal removes barriers preventing me from participating in professional development activities.	1	2	3	4	5
19) Teaching-related duties prevent me from participating in professional development activities beyond the work day.	1	2	3	4	5
20) Additional costs related to childcare/babysitting prevent me from participating in professional development activities.	1	2	3	4	5
21) The staff in my school collaborate often to improve student learning.	1	2	3	4	5
22) My colleagues and I share a common understanding related to teacher development.	1	2	3	4	5
23) Professional development activities are not offered at the time when I am available.	1	2	3	4	5
24) There is a culture among my colleagues that encourages me to participate in professional development activities.	1	2	3	4	5
25) My principal values professional development activities.	1	2	3	4	5

Thank you for your participation!

Appendix 7

Teachers' Participation in Professional Development Programs Survey

(Turkish Version)

Ögretmenlerin Hizmetiçi Egitim Programlarına Katılım Anketi

Değerli öğretmenler:

Sizleri "Ögretmenlerin Hizmetiçi Eğitim Programlarına Katılım Anketine" katılmaya davet ediyorum. Bu anketin amacı siz öğretmenlerin son 12 ay içerisinde hizmetiçi eğitim etkinlikleri ile ilgili tecrübelerinizi tespit etmektir. Bu amaç doğrultusunda elde edilecek veriler siz öğretmenlerin hizmetiçi eğitim etkinliklerine katılımını etkileyen faktörlerin neler olduğunu belirlemek için kullanılacaktır.

Ankete katılım tamamen gönüllülüğe bağlı olup vermiş olduğunuz cevaplar kesinlikle gizli tutulacaktır. Ayrıca, kesinlikle okul müdürü ve İl Milli Eğitim Müdürlüğü yöneticileri ile paylaşılmayacaktır. Anketin cevaplanması icin gerekli olan süre 15 dakikadır.

Eğer anket ile ilgili herhangi bir sorunuz olur ise lütfen 05437298688 numaralı telefon aracılığı ile ya da ab4n3@mail.missouri.edu ve/veya adembayar80@gmail.com e-mail adresleri aracılığıyla Adem Bayar ile iletişime geçiniz.

Ankete katılmış olduğunuz için çok teşekkür ederim.

1. **Kişisel Bilgiler**
2. **Hizmetiçi Eğitim Programları**

Kişisel Bilgiler

S1. Cinsiyetiniz nedir? *Uygun olan numarayı işaretleyiniz.*

Bay…………………………………… 1
Bayan………………………………… 2
Diğer………………………………….. 3

S2. Kaç yaşındasınız? *Uygun olan numarayı işaretleyiniz.*

25'in altında……………………… 1
25-29………………………………… 2
30-39 ……………………………….. 3
40-49 ……………………………….. 4
50-59 ……………………………….. 5
60 ya da 60'dan daha fazla…….. 6

S3. Kaç yıldır öğretmen olarak görev yapmaktasınız? *Uygun olan numarayı işaretleyiniz.*

1-2 yıldır …………..……………… 1
3-5 yıldır ……………………..……… 2
6-10 yıldır ………………………....... 3
11-15 yıldır.....……………………....... 4
16-20 yıldır ……………….……....... 5
20 yıldan daha fazladır …............ 6

S4. Kaçıncı sınıf okutuyorsunuz? *Uygun olan numarayı işaretleyiniz.*

1. sınıf ………………………………… 1
2. sınıf ………………………………… 2
3. sınıf ………………………………… 3
4. sınıf ………………………………… 4
5. sınıf ………………………………… 5
6- 8. Sınıf …………………………….. 6

S5. En son bitirmiş olduğunuz eğitim düzeyi aşağıdakilerden hangisidir? *Uygun olan numarayı işaretleyiniz.*

Ortaokul ……………………………………… 1
Lise …………………………………………… 2
2 Yıllık Yüksekokul ………………………… 3
Fakülte ……………………………………….. 4
Yuksek Lisans ……………………………….. 5
Doktora ……………………………………….. 6

1

Hizmetiçi Eğitim Programları

Aşağıdaki sorular sizlerin hizmetiçi eğitim etkinlikleri ile ilgili tecrübeleriniz hakkında bilgi edinmek amacıyla sorulmuştur.

"**Hizmetiçi Eğitim Etkinliği**" Milli Eğitim Bakanlığı aracılığı ile Milli Eğitim Müdürlüğü tarafından belirtilen tarih ve yerde öğretmenlerin alan bilgisi ve pedagojik alan bilgisini güncellemek ve geliştirmek icin belirli araliklarla organize edilen planlı eğitim etkinliği olarak tanımlanmaktadir.

S1. Aşağıda **İl Milli Eğitim Müdürlüğü tarafından son 12 ay içerisinde düzenlenmiş olan hizmetiçi eğitim etkinliklerini görmektesiniz**. *Bu listeye göre, son 12 ay içerisinde toplam katılmış olduğunuz hizmetiçi eğitim etkinlik sayısını belirtiniz.*

Yandaki isimleri belirtilen hizmetiçi eğitim etkinliklerine katılma sayısını işaretleyiniz.

Çevreye Uyum Eğitimi Semineri	☐
Temel Eğitim Kursu	☐
İlköğretim Kurumları Semineri	☐
Hazırlayıcı Eğitim Kursu	☐
Bilgisayar İnternet Kullanim Kursu	☐
Autocad Kursu	☐
Acil Sağlik Hizmetleri Semineri	☐
Öğrenen Lider Öğretmen Semineri	☐
Erozyon ve Çevre Eğitimi Semineri	☐
Hemşirelik Semineri	☐
Afet ve Acil Durum Hazırlık Uygulamaları Semineri	☐

Hiç katılmadım.	
1 kez katıldım.	
2 kez katıldım.	
3 kez katıldım.	
4 kez katıldım.	
5 kez katıldım.	
6 kez katıldım.	
7 kez katıldım.	
8 kez katıldım.	
9 kez katıldım.	
10 kez katıldım.	
11 kez katıldım.	

S2. Aşağıdaki hizmetiçi eğitim etkinliklerine karşı tutumunuzu ifade eden önermelerden size en uygun olan seçeneği işaretleyiniz.

Uygun olan seçeneği *işaretleyiniz.*

	Kesinlikle Katılmıyorum	Katılmıyorum	Emin Değilim	Katılıyorum	Kesinlikle Katılıyorum
1) Hizmetiçi eğitim etkinlikleri öğretmenler için gereklidir.	1	2	3	4	5
2) Hizmetiçi eğitim etkinlikleri öğretmenlerin öğretim becerilerini geliştirmesine yardımcı olur.	1	2	3	4	5
3) Hizmetiçi eğitim etkinlikleri zaman harcamaya değecek kadar önemlidir.	1	2	3	4	5
4) Hizmetiçi eğitim etkinliklerine katılmak kendimi daha iyi hissetmeme sebep olur.	1	2	3	4	5
5) Öğretmenlerin öğrenmesi için en iyi yol hizmetiçi eğitim etkinliklerine katılmaktır.	1	2	3	4	5
6) Hizmetiçi eğitim etkinliklerine katılmaktan zevk alıyorum.	1	2	3	4	5

S3. Aşağıda ifade edilen önermelere ne ölçüde katıldığınız gösteren en uygun seçeneği işaretleyiniz.

Uygun olan seçeneği *işaretleyiniz.*

	Kesinlikle Katılmıyorum	Katılmıyorum	Emin Değilim	Katılıyorum	Kesinlikle Katılıyorum
1) Öğrencilerime alanımla ilgili tüm konuları başarılı bir şekilde öğretebilirim.	1	2	3	4	5
2) Gerçekten denediğim zaman öğrenme zorluğu çeken (öğrenmesi problemli) öğrencilere bile öğretebilirim.	1	2	3	4	5
3) Öğrencilerimin öğrenme ihtiyaçlarına cevap verecek gerekli yeteneğe sahibim.	1	2	3	4	5
4) Öğrencilerimi öğrenme aktivitelerine katılmaları için motive edebilirim.	1	2	3	4	5
5) Ben gerçekten iyi bir öğretmenim.	1	2	3	4	5

S4. Aşağıda ifade edilen cümlelere ne ölçüde katıldığınızı gösteren en uygun seçeneği işaretleyiniz.

Uygun olan seçeneği işaretleyiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Emin Değilim	Katılıyorum	Kesinlikle Katılıyorum
1) Hizmetiçi eğitim etkinliklerinin düzenlendiği tarihler katılımım için uygundur.	1	2	3	4	5
2) İş arkadaşlarım-meslektaşlarım hizmetiçi eğitim etkinliklerine katılmam için beni desteklerler.	1	2	3	4	5
3) Yerime derslere girecek yedek öğretmenin olmaması hizmetiçi eğitim etkinliklerine katılımımı engeller.	1	2	3	4	5
4) Görev yaptığım okuldaki meslektaşlarım ve ben öğretmenlerin öğrenci başarısını arttırmayı öğrenebileceği konusunda ortak inanca sahibiz.	1	2	3	4	5
5) Okul müdürüm hizmetiçi eğitim etkinliklerine katılmam için beni destekler.	1	2	3	4	5
6) Ek ücret ödenmesi durumunda hizmetiçi eğitim etkinliklerine katılmak için motive olurum.	1	2	3	4	5
7) Hizmetiçi eğitim etkinliklerine düzenli olarak katılmam için yeterli zaman sağlanır.	1	2	3	4	5
8) Meslektaşlarım ve ben hizmetiçi eğitim etkinlikleri hakkında ortak görüşlere-değerlere sahibiz.	1	2	3	4	5
9) Okul müdürüm hizmetiçi eğitim etkinliklerine katılımımı beklemektedir.	1	2	3	4	5
10) Çalıştığım okulda pozitif ve destekleyici bir çalışma ortamı vardır.	1	2	3	4	5

3

11) Hizmetiçi eğitim etkinliklerine katılmaktansa okul sonrasında düzenlenebilen ve karşılığında ek ücret alınan kurslara katılmayı tercih ederim.	1	2	3	4	5
12) Öğrencilerin öğrenmesi ve öğretimi konusunda görev yapmakta olduğum okuldaki tüm kişiler ve ben ortak değerlere sahibiz.	1	2	3	4	5
13) Okul müdürüm hizmetiçi eğitim etkinliklerine katılmam için gerekli olan kaynakları bana sağlar.	1	2	3	4	5
14) Öğrencilerin öğrenmesi görev yapmakta olduğum okulun ortak amacıdır.	1	2	3	4	5
15) Okuldaki çalışma saatlerinin dışındaki saatlerde düzenlenmekte olan hizmetiçi eğitim etkinliklerine ailevi sorumluluklarımdan dolayı katılmam zordur.	1	2	3	4	5
16) Meslektaşlarım ve ben hizmetiçi eğitim etkinliklerine birlikte katılırız.	1	2	3	4	5
17) Hizmetiçi eğitim etkinliklerine katılmak için gerekli olan yol masrafları katılımımı engeller.	1	2	3	4	5
18) Okul müdürüm hizmetiçi eğitim etkinliklerine katılımıma engel olan bariyerleri ortadan kaldırır	1	2	3	4	5
19) Mesai saatlerinin dışındaki öğretim ile ilgili olan işlerim (plan, sınav kâğıdı okuma, soru hazırlama, materyal hazırlama vb.) hizmetiçi eğitim etkinliklerine katılmamı engeller.	1	2	3	4	5
20) Çocuk bakımı-kreş gibi ekstra masrafların olması hizmetiçi eğitim etkinliklerine katılımımı engeller.	1	2	3	4	5
21) Görev yapmakta olduğum okuldaki meslektaşlarım ve ben öğrencilerin öğrenmelerini geliştirmek icin çoğunlukla birlikte hareket ederiz.	1	2	3	4	5
22) Meslektaşlarım ve ben hizmetiçi eğitim sayesinde öğretmenlerin geliştiği ortak anlayışına sahibiz.	1	2	3	4	5
23) Hizmetiçi eğitim etkinlikleri benim uygun olduğum zamanlarda düzenlenmemektedir.	1	2	3	4	5
24) Görev yaptığım okuldaki meslektaşlarım arasında hizmetiçi eğitim etkinliklerine katılımımı destekleyen ortak bir kültür vardır.	1	2	3	4	5
25) Okul müdürüm hizmetiçi eğitim etkinliklerine değer verir.	1	2	3	4	5

Çalışmaya katıldığınız için çok teşekkür ederim.

Araştırmacı Adem BAYAR

4

Appendix 8

The Assumptions of Explanatory Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.898
Bartlett's Test of Sphericity	Approx. Chi-Square	1.170E4
	Df	820
	Sig.	.000

Appendix 9

Construct Validity of the Survey

Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
ta_4	.916				
ta_6	.904				
ta_5	.895				
ta_3	.894				
ta_2	.894				
ta_1	.893				
time_1	.793				
time_5	.783				
principal_3		.785			
principal_5		.783			
principal_1		.739			
principal_4		.694			
principal_2		.690			
sc_2		.683			
col_5		.633			
col_4		.575			
sc_3		.558			
sc_4		.534			
sc_5		.513			
col_1		.508			
col_2		.488			
col_3		.483			

sc_1		.475			
time_2		.470			
se_3			.808		
se_4			.800		
se_1			.778		
se_5			.726		
se_2			.553		
fund_5				.798	
time_4				.731	
time_3				.710	
fund_4				.707	
fund_3				.531	
fund_2				.371	
fund_1					
Te					.892
Age					.866
edu_level					-.637
Grade					-.361
Gender					-.319

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

BIBLIOGRAPHY

Abadiano, H. L. & Turner, J. (2004). Professional staff development: What works? The *NERA Journal, 40*(2), 87-91.

Abbate-Vaughn, J. & Paugh, P. (2009). The paraprofessional to teacher pipeline: Supports throughout graduation. *Journal of Developmental Education, 33*(1), 14-27.

Abdal-Haqq, I. (1996). *Making time for teacher professional development.* ERIC Digest (ED400259). Washington, DC: Clearinghouse on Teaching and Teacher Education.

Acikalin, A. (1987). Universitelerde ogretmenlerin hizmeticinde yetistirilmesi [In-service training of teachers at universities]. *Hacettepe Universitesi Egitim Fakultesi Dergisi, 2*, 250-263.

Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice Hall.

Ajzen, I., & Driver, B.L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of Leisure Research, 24* (3), 207 - 224.

Amos, N., & Benton, G. (1988). *Teacher attitudes toward staff development and related activities in a rural educational consortium.* Paper presented at the annual meeting of the Mid-South Educational Research Association.

Ascher, C. & Fruchter, N. (2001). Teacher quality and student performance in New York City's low- performing schools. *Journal of Education for Students Places at Risk, 6*(3), 199-214.

Ashton, P. T. (1984). Teacher efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education, 35*(5), 28-32.

Ashton, P.T. & Webb, R.B. (1986). *Teacher efficacy and student achievement.* New York, N.Y.: Longman.

Aytac, T. (2000). Hizmet ici egitim kavrami ve uygulamada karsilasilan sorunlar. [The concept of in-service training and issues in the process of its implementation]. *Milli Egitim, 147,* 66-69.

Azar, A. & Karaali, Ş. (2004). Fizik öğretmenlerinin hizmet içi eğitim ihtiyaçları. [In-service training needs of physics teachers]. *Milli Eğitim, 162*, 279-295.

Babbie, E. (1998). *The practice of social research (8th ed.)*. Belmont, CA: Wadsworth.

Bandura, A., (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, New Jersey: Prentice Hall.

Bayindir, N. (2009). *Teachers' perception levels of activities directed towards professional progress.* Retrieved from http://findarticles.com/p/articles/mi_qa3673/is_1_130/ai_n35666692/pg_6/

Becker, E. A., & Gibson, C. C. (1998). Fishbein and Ajzen's theory of reasoned action: Accurate prediction of behavioral intentions for enrolling in distance education courses. *Adult Education Quarterly, 49* (1), 43-55.

Beduk, A. E. (1997). Okullar da hizmetici egitim planlamasi yapabilmeli ve uygulamalidir [Schools should be able to plan and implement in-service training], *Milli Egitim,133*, 7-8.

Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change: Vol. VII. Factors affecting implementation and continuation* (Report No. R-1589/7 HEW). Santa Monica, CA: Rand Corporation. (ERIC Document Reproduction Service No. 140432).

Birman, B.F., Desimone, L., Porter, A.C., & Garet, M. S. (2000). Designing professional development that works. *Educational Leadership, 57*(8), 28-33.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3-15.

Borg, W. R. & Gall, M. D. (1989). *Educational research.* White Plains, NY: Longman.

Borman, G. D. & Kimball, S. M. (2005). Teacher quality and educational equality: Do teachers with higher standards based evaluation ratings close student achievement gaps? *The Elementary School Journal, 106*(1), 3-20.

Boydak, M. (1995). İngiltere'deki hizmetiçi eğitim uygulamaları. [Applications of in-service training programs in the United Kingdom], *Fırat Üniversitesi Sosyal Bilimler Dergisi, 7*(1-2), 29-35.

Boydak, O. M., & Dikici, A. (2001). Hizmet ici egitim programlarinin etkililiginin degerlendirilmesi.[The evaluation of the effectiveness of in-service training programs]. *Firat Universitesi Sosyal Bilimler Dergisi, 11*(2), 225-240.

Boyle, B., While, D., & Boyle, T. (2004). A longitudinal study of teacher change: What makes professional development effective? *The Curriculum Journal, 15*(1), 45-68.

Bredeson, P.V. (2002). The architecture of professional development: materials, messages and meaning. *International Journal of Educational Research, 37*, 661–675.

Brookover, W. P., & Lezotte, L. W. (1979). *Changes in school characteristics coinciding with changes in student achievement.* East Lansing, MI: Michigan State University, Institute for Research on Teaching.

Campbell, A., McNamara, O., & Gilroy, P. (2004). *Practitioner research and professional development in education.* London, Paul Chapman.

Carver, C. L. & Katz, D. S. (2004). Teaching at the boundary of acceptable practice: What is a new teacher mentor to do? *Journal of Teacher Education, 55*(5), 449-462. Retrieved from http://dx.doi.org/10.1177/0022487104269524

Cheng, Y. C. (1996). Relation between teachers' professionalism and job attitudes, educational outcomes, and organizational factors. *The Journal of Educational Research, 89*(3), 163-171.

Colbert, J. A., Brown, R. S., Choi, S-H., & Thomas, S. (2008). An investigation of the impacts of teacher-driven professional development on pedagogy and student learning. *Teacher Education Quarterly, 35*(2), 135-154.

Collins, P. M. (2011). *Motives for and barriers to participation in post secondary educational attainment in Northern Wisconsin* (Unpublished master's thesis). University of Wisconsin-Stout.

Collinson, V. (2000). Staff development by any other name: Changing words or changing practices. *The Educational Forum, 64*(2), 124-132.

Collinson, V. & Cook, T. F. (2000). "I don't have enough time" Teachers' interpretations of time as a key to learning and school change. *Journal of Educational Administration, 39*(3), 266- 281.

Collinson, V. & Cook, T. F. (2004). Learning to share, sharing to learn: Fostering organizational learning through teachers' dissemination of knowledge. *Journal of Educational Administration, 42*(3), 312-332.

Corcoran, T. B. (1995). Helping teachers teach well: Transforming professional development. *Consortium for Policy Research in Education,* 1-11.

Courtney, S. (1992). *Why adults learn. Towards a theory of participation in adult education.* New York: Routledge.

Cross, K. P. (1981). *Adult as Learners. Increasing participation and facilitating learning.* San Francisco: Jossey-Bass.

Dall'Alba, G., & Sandberg, J. (2006). Unveiling professional development: A critical review of stage models. *Review of Educational Research, 76* (3), 383- 412.

Darkenwald, G.G. & Merriam, S. B. (1982). *Adult education: Foundations of practice.* New York, NY: Harper and Row.

Day, C (1999). *Developing teachers: The challenges of lifelong learning.* London, Falmer Press.

de Leeuw, E.D., Dillman, D.A., & Hox, J. J. (2008). Mixed mode surveys: When and why. In E. D. de Leeuw, J. J. Hox, & D. A. Dillman (Eds.), *International handbook of survey methodology* (pp. 299-316). Mahwah, NJ: Lawrence Erlbaum.

Dembo M.H. & Gibson, S. (1985). Teachers' sense of efficacy: An important factor in school improvement. *The Elementary School Journal. 86*(2), 173-184.

Demirtas, Z. (2010). Ögretmeni hizmeticinde yetistirmenin bir araci olarak denetim [As a tool for training teacher in-service, supervision]. *Electronic Journal of Social Sciences (Elektronik Sosyal Bilimler Dergisi), 9*(31), 41-52.

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.

De Vaus, D. A. (1995). *Survey in social research (4th ed.).* New South Wales, Australia: Allen & Unwin Pty Ltd.

Devlet Memurlari Kanunu (657 SK) [Civil Servants' Law] (23 Temmuz 1965), Resmi Gazete, 12056.

Dillman, D. A. (2007). *Mail and Internet surveys: The tailored design method (2nd ed.).* Hoboken, NJ: John Wiley & Sons, Inc.

Donahoe, T. (1993). Finding the way: Structure, time, and culture in school improvement. *The Phi Delta Kappan, 75*(4), 298-305.

Ducheny, K., Allezhauser, H. L., Crandell, D., & Schneider, T. R. (1997). Graduate student professional development. *Professional Psychology: Research and Practice, 28*, 87–91.

Duquette, A., Painchaug, C., & Blais, J. G. (1987). *Perceptions of deterrents to continuing education: Perspectives from a female profession.* Proceedings of the 28th Annual Adult Education Research Conference, (61-66). ERIC Document Reproduction Service No.ED283936)

Earley, P. & Bubb, S. (2004). *Leading and managing continuing professional development: Developing people, developing schools.* London, SAGE publications, Inc.

Easton, L. B. (2008). From professional development to professional learning. *Phi delta Kappan, 89*(10), 755-761.

Elman, N. S., Illfelder-Kaye, J., & Robiner, W. N. (2005). Professional development: Training for professionalism as a foundation for competent practice in psychology. *Professional Psychology: Research and Practice, 36*(4), 367–375.

Erisen, Y. (1998). Ogretmenlere yonelik hizmetici egitim programlarini gelistirmede egitim ihtiyaci belirleme sureci. [The process of the determination of the needs of teachers on in-service training programs]. *Milli Egitim, 140*, 1-12.

Fallon, D. (1999). *Our grand opportunity: Remarks on teacher education for college and university chief* executives. University of Maryland, September 15.

Field, A. P. (2005). *Discovering statistics using SPSS (2nd edition).* Thousand Oaks, CA: SAGE Publications, Inc.

Fink, A. (2003). *The survey kit: The survey handbook (2nd ed.).* Thousand Oaks, CA: SAGE Publications, Inc.

Fishbein & Ajzen (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research.* Reading, MA: Addison, Wesley.

Fishbein, M., & Stasson, M. (1990). The Role of Desires, Self-Predictions, and Perceived Control in the Prediction of Training Session Attendance. *Journal of Applied Social Psychology, 20*(3), 173-198.

Fishman, B. J., Marx, R. W., Best, S., & Tal, R. T. (2003). Linking teacher and student learning to improve professional development in systemic reform. *Teaching and Teacher Education, 19*, 643-658.

Fowler, F. J. (2002). *Survey research methods (3rd ed.).* Thousand Oaks, CA: SAGE Publications, Inc.

Fowler, F. J. (2009). *Survey research methods (4th ed.).* Thousand Oaks, CA: SAGE Publications, Inc .

Fraenkel, J. R., & Wallen, N. E. (2003). *How to design and evaluate research in education (5th ed.).* New York: McCraw-Hill.

Fullan, M. (1995). The limits and the potential of professional development. In T. R. Cuskey, & M. Huberman (Eds.), *Professional development in education: New paradigms and practices.* New York: Teacher College Press.

Gonen,S. & Kocakaya, S. (2006). Fizik ogretmenlerninin hizmetici egitimler uzerine goruslerinin degerlendirilmesi. [The evaluation of physics teachers on in-service training]. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 19*(1), 37-44.

Grabowski, S. M. (1976). Motivational and participation patterns. In C. Klevins (Ed.). *Materials & methods in continuing education* (pp.213-221). New York: Klevens.

Guglielmi, R. S., & Tatrow, K. (1998). Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. *Review of Educational Research, 68*(1), 61-99.

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 4*, 63-69.

Guskey, T. R. (1994). *Professional development in education: In search of the optimal mix* (Report No: ED 369181). American Educational Research Association, New Orleans, LA.

Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of constructs dimensions. *American Educational Research Journal, 31*(3), 627-643.

Guskey, T. R. (1999). Apply time with wisdom. *Journal of Staff Development. 20*(2),10-15.

Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, 8*(3).

Guskey, T. R. (2003). *Professional development that works: What makes professional development effective?* Report in American Educational Research Association. Chicago.

Hargreaves, A. (1992) Time and teachers' work: an analysis of the intensification thesis. *Teachers College Record, 94*(1), 87-108.

Hargreaves, D.H. (1994). The new professionalism: The synthesis of professional and institutional development. *Teaching and Teacher Education 10*(4), 423-438.

Harland & Kinder (1997). Teachers' continuing professional development: framing a model of outcomes. *Journal of In-Service Education, 23*(1), 71-84.

Harris, A., Day, C., Goodall, J., Lindsay, G., & Muijs, D. (2005). *What different does it make? Evaluating the impacts of continuing professional development in schools.* Retrieved from http://www.scotedreview.org.uk/pdf/228.pdf

Heppner, P. P., & Heppner, M. J. (2004). *Writing and publishing your thesis, dissertation & research*. Belmont, CA: Brooks/Cole- Thompson Learning.

Hering, W., & Howey, K. (1982). *Research in, on, and by teachers' centers.* Occasional Paper No. 10. San Francisco, CA: Teachers' Center Exchange, Far West Laboratory for Educational Research and Development.

Hirsh, S. (2001). We're growing and changing. *Journal of Staff Development, 22*(3), 255-258.

Hodge, C. L. & Krumm, B. L. (2009). NCLB: A Study of its effects on rural schools-School administrators rate service options for students with disabilities. *Rural Special Education Quarterly, 28*(1), 20-27.

Hodkinson, H. & Hodkinson, P. (2005). Improving schoolteachers' workplace learning. *Research Papers in Education, 20*(2), 109-131.

Hoy, W. & Woolfolk, A. (1993). Teachers' sense of efficacy and the organizational health of schools. *Elementary School Journal, 93*(4), 355-372.

Jackson, A. (2000). Action technologies: Supporting continuing professional development. *Research in Post-Compulsory Education, 5*(3), 361-370.

Johnson, B. & Christensen, J. (2008). *Educational research (3rd ed.).* Thousand Oaks: CA, Sage.

Jonson, K. F. (2002). *Being an effective mentor: How to help beginning teachers succeed.* Thousand Oaks, CA: Corwin Press.

Kaçan, G., (2004). Sınıf öğretmenlerinin mesleki gelişime ilişkin isteklilik düzeyleri. [The level of desires of primary education teachers about professional development]. *Osman Gazi Üniversitesi Sosyal Bilimler Dergisi, 5*(1), 58-66.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*, 31-36.

Kanli, U. & Yagbasan , R. (2002). 2000 yılında Ankara'da fizik oğretmenleri için düzenlenen hizmetiçi eğitim yaz kursunun etkinliği. [The effectiveness of in-service training activities for pyhsics teachers in Ankara, 2000]. *Milli Egitim Dergisi, 153-154,* 37-47.

Kaya, A., Cepni, S. & Kucuk, M. (2004). Fizik oğretmenleri için universite destekli bir hizmet içi eğitim model onerisi. [An in-service training model at university for psychics teachers]. *The Turkish Online Journal of Educational Technology, 3*(1), 112-119.

Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. New York: The Guilford Press.

Klingner, J.K., Vaughn, S., Hughes, M.T., & Arguelles, M. E. (1999). Sustaining research-based practices in reading: A 3-year follow-up. *Remedial and Special Education, 20,* 263-274.

Klingner, J. K. (2004). The science of professional development. *Journal of Learning Disabilities, 37*(3), 248-255.

Kontoghiorghes, C. (2001). A holistic approach toward motivation to learn in the workplace. *Performance Improvement Quarterly, 14*(4), 3-17.

Kwakman, K. (2001). Work stress and work-based learning in secondary education: Testing the karasek model. *Human Resource Development International, 4*, 487–501.

Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education, 19*, 149-170.

Lee, O., & Gallagher, J. J. (1986). *Differential treatment of individual students and whole classes by middle school science teachers: Causes and consequences.* Paper presented at the National Association for Research in Science Teaching, San Francisco.

Leonard, L. & Leonard, P. (2003). The continuing trouble with collaboration: Teachers talk. *Current Issues in Education (Online), 6* (15). Retrieved from http://cie.ed.asu.edu/volume6/number15/.

Lieberman, A. (1995). Practices that support teacher development: Transforming conceptions of professional learning. *Phi Delta Kappan, 76*, 591-596.

Little, J. W. (1989). District policy choices and teachers' professional development opportunities. *Educational Evaluation and Policy Analysis, 11*(2), 165-179.

Lohman, M. C. (2006). Factors influencing teachers' engagement in informal learning activities. *Journal of Workplace Learning, 18*(3), 141-156.

Lohman, M. C. & Woolf, N. H. (2001). Self-initiated learning activities of experienced public school teachers: Methods, sources, and relevant organizational influences. *Teachers and Teaching: Theory and Practice, 7*(1), 59-74.

Lowden, C. (2005). Evaluating the impact of professional development. *The Journal of Research in Professional Learning,* 1-22. Published by the National Staff Development Council www.nsdc.org

Maeroff, G. I. (1993). *Team building for school change: Equipping teachers for new roles.* New York: Teacher College Press.

Mahon, J. P. (2003). Professional development for K-12 reform. *Principal Leadership (Middle School Edition), 3*(6), 51-53.

McCamey, R. B. (2003). *The relationship between the reasons for participation in continuing professional education and the leader effectiveness of first-line supervisors* (Unpublished doctoral dissertation). University of North Texas, Danton, Texas.

McCaughtry, N., Martin, J., Kulinna, P. H., & Cothran, D. (2006). What makes teacher professional development work? The influence of instructional resources on change in physical education. *Journal of In-service Education, 32*(2), 221-235.

McLaughlin. M. W., & Talbert, J. E. (2006). *Building school-based teacher learning communities: Professional strategies to improve student achievement.* New York: Teacher College Press.

McLaughlin, M. W. & Marsh, D. (1978). Staff development and school change. *Teachers College Record, 80*(1), 70-94.

Meister, D., M. (2010). Experienced secondary teachers' perceptions of engagement and effectiveness: A guide for professional development. *The Qualitative Report, 15*(4), 880- 898.

Miller, E. (1998). The old model of staff development survives in a world where everything else has changed. In R. Tovey (Ed.), *Professional development, Harvard education letter focus series, 4.* Cambridge: Harvard Education Letter.

Moir, E. & Gless, J. (2001). Quality induction: An investment in teachers. *Teacher Education Quarterly, 28*(1), 109-114. Retrieved February 17, 2010, from ERIC database.

Moss, B. & Noden, H. (1994). What works for teaches in professional growth and development. *The Reading Teacher, 47*(8), 672-673.

National Commission on Teaching and America's Future. (1996). *What matters most: Teaching and America's Future.* New York: Teachers College Press.

National Education Statistics, (2010). A Publication of Official Strategies Programme. Ministry of National Education, Republic of Turkey. Retrieved January, 15, 2012, from www.meb.gov.tr

National Staff Development Council, (2001). *Standards for staff development.* Retrieved March, 23, 2011, from www.nscd.org/educatorindex.htm.

Newman, I., & McNeil, K. (1998). *Conducting survey research in the social sciences.* Lanham, MD: University Press of America.

Okoye, S. N.,Momoh, S. O., Aigbomain, D. O. & Okecha, R.E. (2008). Teachers' quality, instructional strategies and students' performance in seconsay school science. *Journal of Instructional Psychology. 34*(4), 204-211.

Opfer, V. D. & Pedder, D. (2011). The lost promise of teacher professional development in England. *European Journal of Teacher Education, 34*(1), 3-24.

Oral, B. & Saglam. S. (2010). *The importance of in-service training in restructuring sectors.* World Conference on Educational Science (WCES), Istanbul, Turkey.

Organization for Economic Co-operation and Development (OECD). (2009). *Creating effective teaching and learning environments: First results from Teaching and Learning Survey (TALIS).*

Orhan, F. & Akkoyunlu, B. (1999). Uzaktan egitim yaklasiminda temel egitim 1. kademe ogretmenlerininin video destekli hizmetici egitimi. [Video assisted in-service training program for primary education teachers]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 16-17*, 134 – 141.

Ozer, B. (2001). *Ortaögretim ogretmenlerinin mesleki gelisime yaklasimi* [Secondary school teachers' approach to professional development]. Yayimlanmamis arastirma raporu, Eskisehir.

Ozer, B. (2004). In-service training of teachers in Turkey at the beginning of the 2000s. *Journal of In-service Education, 30*(1), 89-100.

Ozer, B. (2008). Öğretmenlerin mesleki gelişimi. [Professional development of teachers] A. Hakan (Ed.), *Öğretmenlik meslek bilgisi alanındaki gelişmeler* [The developments in the field of teaching] (pp. 195-216). Eskişehir: Anadolu Üniversitesi Açıköğretim Fakültesi.

Ozer, N. & Beycioglu, K. (2010). The relationship between teacher professional development and burnout. *Procedia Social and Behavioral Sciences, 2*(2), 4928-4932.

Ozturk, M., & Sancak, S. (2007). Hizmetici egitim uygualamarinin calisma hayatina etkileri. *Journal of Yasar University, 2*(7), 761-794. Retrieved from joy.yasar.edu.tr/makale/no7_vol2/10_ozturk.pdf

Palardy, G. J. & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, instructional practices for student learning. *Educational Evaluation and Policy Analysis, 30*(2), 111-140.

Payne, D. & Wolfson, T. (2000). Teacher professional development: The principal's critical role. *NASSO Bulletin, 84*(13), 13-21.

Pedder, D., James, M., & MacBeath, J. (2005). How teachers value and practice professional learning. *Research Papers in Education, 20*(3), 209-243.

Pehlivan, İ. (1997). Türkiye'de ulusal kalkınma ve kurumsal verimliliğin en onemli araçlarından biri hizmetiçi eğitimdir [In-service training is one of the most Important tools for the national development and corporate productivity of Turkey]. *Milli Eğitim, 133*, 26-28.

Penuel, W. R., Fishman, J. B., Yamaguchi, R., & Gallagher, L. P. (2007). What makes professional development effective? Strategies that foster curriculum implementation. *American Educational Research Journal, 44*(4), 921-958 http://aerj.aera.net

Peske, H. C. & Haycock, K. (2006). Teaching inequality: How poor and minority students are shortchanged on teacher quality, A report and recommendations by The Education Trust. *The Education Trust,* 1-18.

Porter, A. C., & Brophy, J. E. (1988). Synthesis of research on good teaching: Insights from the work of the institute for research on teaching. *Educational Leadership, 45*(8), 74-85.

Postholm, M., B. (2011). A completed research and development work project in school: The teachers' learning and possibilities, premises and challenges for further development. *Teaching and Teacher Education, 27*, 560-568.

Prestholdt, P. H., & Fisher, J. L. (1983, March). *Dropping out of high school: An application of the theory of reasoned action.* Paper presented at the Annual Meeting of the Southeastern Psychological Association (29th, Atlanta, GA). (ERIC #ED244178).

Putnam, R. T., & Borko, H. (1997). Teacher learning: Implications of new views of cognition. In B. J. Biddle, T. L. Good, & I. F. Goodson (Eds.), *International handbook of teachers & teaching* (pp. 1223-1296). Dordrecht: Kluwer.

Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher, 29*(1), 4–15.

Raywid, M. A. (1993). Finding time for collaboration. *Educational Leadership, 51*(1), 30-34.

Richardson, J. (1997). Smart use of time and money enhances professional development. *Journal of Staff Development,* 46-49.

Richardson, V. (2003). The dilemmas of professional development. *Phi Delta Kappan, 84*(5), 401-406.

Roberts, C. M. (2003). *The dissertation journey: A practical and comprehensive guide to planning, writing, and defending your dissertation.* Thousand Oaks: CA, Corwin Press.

Robinson, R. & Carrington, S. (2002). Professional development for inclusive schooling. *International Journal of Educational Management, 16*(5), 239 – 247.

Robinson-Horne, J. P., & Jackson, K. W. (2000). *Factors deterring participation in professional activities.* (ERIC Document Reproduction Service No. ED438332)

Rockoff, J.E. (2004). The Impact of Individual Teachers on Student Achievement Evidence from Panel Data. *The American Economic Review, 94*(2), 247-252.

Rogers, M. P., Abell, S., Lannin, J., Wang, C-Y, Musikul, K., Barker, D., & Dingman, S. (2007). Effective professional development in science and mathematics education: Teachers' and facilitators' views. *International Journal of Science and Mathematics Education, 5*, 507-532.

Rosenholtz, S. (1989). *Teachers' workplace: The social organization of schools.* New York: Longman.

Rosenholtz, S,J., Bassler, O., & Hoover-Dempsey, K. (1986). Organizational conditions of teacher learning. *Teaching and Teacher Education, 2*(2), 91-104.

Ross, J. & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *The Journal of Educational Research, 101*(1), 50-60.

Rubenson, K. (1977). Participation in recurrent education, Paris: Center for Educational Research and Innovations. Organisation for Economic Cooperation and Development.

Silane Ruberto, J. (2003). *A study of the attitudes of veteran teachers toward professional development.* Retrieved from http://scholarship.shu.edu/dissertations/145.

Saban, A. (2000). *Hizmet içi eğitimde yeni yaklaşımlar.* [New approaches in in-service training] Retrieved from http://yayim.meb.gov.tr/dergiler/145/saban.htm

Sandholtz, J. H. & Scribner, S. P. (2006). The paradox of administrative control in fostering teacher professional development. *Teaching and Teacher Education, 22*, 1104-1117.

Scanlan, C. L. (1986). *Deterrents to participation: An adult education dilemma.* Information Series No. 308, ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, Ohio. Sponsoring Agency: Office of Educational Research and Improvement (ED), Washington DC. (ERIC #ED272768).

Seferoglu, S. S. (2001). Elementary school teachers perception of professional development (Sinif ogretmenlerinin mesleki gelisim uygulamalari ile ilgili gorusleri). *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 20*, 117 -125.

Seferoglu,S. S. (2005). *A Study on teaching competencies of teacher candidates.* Proceedings of International Conference on Education (ICE). National University of Singapore, Singapore.

Seferoglu, S. S. (2007). Professional teaching standards: The case of Turkish teacher candidates. *World Applied Science Journal, 2*(4), 412-419.

Selimoğlu, E., & Yılmaz, B. H. (2009). Hizmet ici egitimin kurum ve calisanlar uzerine etkileri. [The effects of in-service training programs to the institutions and employees]. *Ekonomi, Sosyoloji ve Politika Dergisi, 5*(1). Retrieved from http://www.paradoks.org.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization.* New York: Doubleday/ Currency.

Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization (Revised edition).* New York: Currency Doubleday.

Shafer, F. K. (2009). *An investigation of selected factors that influence middle-level teachers' professional development choices* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3342322)

Shannon, J. R. (1948). Percentage of returns of questionnaires in reputable educational research. *Journal of Educational Research*, 42, 138-141.

Smylie, M. A. (1988). The enhancement function of staff development: Organizational and psychological antecedents to individual teacher change. *American Educational Research Journal, 25*(1), 1-30.

Sparks, D., & Loucks-Horsley, S. (1989). Five models of staff development for teachers. *Journal of Staff Development, 10*(4), 40-57.

Starkey, L., Yates, A., Meyer, L. H., Hall, C., Taylor, M., Stevens, S. & Toia R. (2009). Professional development design: Embedding educational reform in New Zealand. *Teaching and Teacher Education, 25*, 181-189.

Supovitz, J. A. & Turner, H. M. (2000). The effects of professional development on science teaching practices and classroom culture. *Journal of Research in Science Teaching, 37*(9), 963-980.

Sykes, G. (1996). Reform of and as professional development. *Phi Delta Kappan, 77*(7), 464- 470.

Taymaz, A. H., Sunay, Y., & Aytaç, T. (1997). Hizmet içi eğitimde koordinasyon sağlanması toplantısı [Provision of collaboration in in-service training]. *Milli Eğitim, 133*, 13-17.

Thompson, C. L. & Zeuli, J. S. (1999). The frame and the tapestry: Standards-based reform and professional development. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp 341-375). San Francisco: Jossey Bass.

Torff, B. & Sessions, D. (2008). Factors associated with teachers' attitudes about professional development. *Teacher Education Quarterly, 35*(2), 123-133.

Torff & Sessions, (2009). Teachers' attitudes about professional development in high-SES and low-SES communities. *Learning Inquiry, 3*(2), 67-77.

Tracey, J. B., Hinkin, T. R., Tannenbaum, S., & Mathieu, J. E. (2001). The influence of individual characteristics and the work environment on varying levels of training outcomes. *Human Resource Development Quarterly, 21*(1), 5-21.

Ucar, R. & İpek, C. (2006). İlköğretim okullarında görev yapan yönetici ve öğretmenlerin MEB hizmet içi eğitim uygulamalarına ilişkin görüşleri.[The views of principals and teachers about in-service training activities]. *Yüzüncü Yıl Üniversitesi, Eğitim Fakültesi Dergisi, 3*(1), 34-53.

U. S. Department of Education. National Center for Education Statistics, (1998). *Adult education participation decisions and barriers: Review of conceptual frameworks and empirical studies.* Working Paper No. 98-10, by Tim Silva, Margaret Cahalan, and Natalie Lacierno-Paquet. Peter Stowe, Project Officer. Washington DC: 1998. Retrieved February 12, 2012, from http://nces.ed.gov/pubs98/9810.pdf

Valentine, T. (1997). The United States of America: The current predominance of learning for the job. In P. Belanger & S. Valdivielso (Eds.), *The emergence of learning societies: Who participates in adult learning?* (pp. 95-132). Oxford, UK: Pergamon and UNESCO Institute for Education.

Valentine, T., & Darkenwald, G. G. (1990). Deterrents to participation in adult education: Profiles of potential learners. *Adult Education Quarterly, 41*(1), 29-42.

Villegas-Reimers, E. ve Reimers, F. (2000). The professional development of teachers as lifelong learning: Models, practices and factors that influence it. The Board on International Comparative Studies in Education of the National Academies / National Research Council Web Sitesi: http://www7.nationalacademies.org/bicse/Villegas_Reimers.pdf, 22.03.2007.

Visser, T.C., Coenders, F. G. M., Terlouw, C., & Pieters, J. M. (2010). Essential characteristics for a professional development program for promoting the implementation of a multidisciplinary science module. *Journal of Science Teacher Education, 21*, 623-642.

Vogt, F. & Rogalla, M. (2009). Developing adaptive teaching competency through coaching. *Teaching and Teacher Education, 25*, 1051-1060.

van Woerkom, M., Nijhof, W. J., & Nieuwenhuis, L.F. M. (2002). Critical reflective working behavior: a survey research. *Journal of European Industrial Training, 26*(8), 375-383.

Watts, G. D., & Castle, S. (1993). The time dilemma in school restructuring. *Phi Delta Kappan, 75*(4), 306-310.

Ware, H. & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of professional commitment. *The Journal of Educational Research,* 303-310.

Westheimer, J. (1998). *Among school teachers: Community autonomy and ideology in teachers' work.* Teachers College Press.

Wexler, M.N. (2000). Emotional intelligence: A review and appraisal. Optimum, *The Journal of Public Management, 30*(2), 1-8.

Wideen, M. F. (1992). School-based teacher development. In M. Fullan & A. Hargreaves (Eds.), *Teacher development and educational change* (pp. 123–149). London: Falmer Press.

Wikelund, R. K., Reder, S., & Hart-Landsberg, S. (1992). *Expanding theories of adult literacy participation: A literature review.* National Center on Adult Literacy.

Yamagata-Lynch, L. C. & Haudenschild, M. T. (2009). Using activity systems analysis to identify inner contradictions in teacher professional development. *Teaching and Teacher Education, 25*, 507-517.

Yuksekogretim Kurumlari Teskilati Hakkinda 41 Sayili Kanun Hukmunde Kararnamenin Degistirilerek Kabulune Dair Kanun (2809 SK) [Higher Education Institutions' Organisation Law] (1983) Resmi Gazete, 18003.

Young, R., & Kent, A. T. (1985). Using the theory of reasoned action to improve the understanding of recreation behavior. *Journal of Leisure Research, 17*(2), 90-106.

VITA

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