TEACHERS' REPORTS OF THEIR IN-SERVICE TRAINING NEEDS AND DESIGN PREFERENCES

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ABSTRACT

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Policy makers, school and district leaders, researchers, industry, and parents are all increasingly concerned with improving the quality of education in schools. Therefore, teachers need to welcome and keep themselves up-to-date about the improvements, developments, and educational reforms. At this point, in-service training of teachers is one of the most urgent concerns of teacher educators and policy makers. Although there is a widespread view on the importance of teachers' professional learning, how design and process should be handled is still questioning issue. The purpose of this study was to determine the kinds and qualities of in-service training that teachers needed. Professional development designs' three elements were highlighted in this research. Content refers what designer of professional development expects teachers to learn; form denotes the context, materials, schedule, and evaluation in which learning takes place; audiences are targeted group of teachers who needs to participate some certain programs. Via survey design; data were collected from 1730 teachers, and analyzed through ANOVA and Structural Equation Modeling. Teachers reported an occasional need for Guidance and Special Education, Preparation for

Inter/national Exams, Self-development, Professional Teaching Knowledge, and Technology Use, and reported medium satisfaction with previous programs. They also reported their preferences for in-service training program format. All these results were discussed together, and combined as design elements of training programs. Determining what teachers need and prefer and how they learn best made it possible to provide suggestions for Turkish teacher training policy to maximize the match between teacher needs and the content and process by which those needs are met.

Keywords: Professional Development, In-service Training, Teacher Education

ÖZ

ÖĞRETMENLERİN HİZMETİÇİ EĞİTİM İHTİYAÇLARI VE TASARIM TERCİHLERİ

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Politika yapıcılar, okul ve bölge yöneticileri, araştırmacılar, sanayi ve ebeveynler okullarda eğitimin kalitesinin artırılması ile giderek daha yakından ilgilenmektedirler. Bu nedenle, öğretmenler de bu değişimlere ayak uydurmalı ve kendilerini eğitim reformları hakkında güncel tutmalıdırlar. Bu noktada, öğretmenlerin hizmetiçi eğitimi politika yapıcılarının ve öğretmen eğitimcilerinin en ivedi konularından biridir. Öğretmenlerin mesleki gelişimlerinin önemi hakkında yaygın bir görüş olsa da mesleki gelişimin tasarımı ve süreci konularının nasıl ele alınacağı halen sorgulanan bir konudur. Bu çalışmanın amacı, öğretmenlerin ihtiyaç duydukları hizmetiçi eğitim türlerini ve hizmetiçi eğitim programlarının özelliklerini belirlemektir. Bu araştırmada mesleki eğitim tasarımlarının üç temel öğesi vurgulanmaktadır. İçerik, mesleki gelişim tasarımcısının öğretemenden öğrenmesini beklediği konular; biçim, öğrenmenin gerçekleştiği yöntem, yer, zaman, materyaller ve değerlendirme ortamları; hedef

kitle ise ulaşılması hedeflenen belirli eğitimlere katılmaya ihtiyaç duyan öğretmenler. Tarama yöntemi ile veri 1730 öğretmenden toplanmıştır ve Varyans analizi ve Yapısal Eşitlik Modeli ile analiz edilerek yorumlanmıştır. Sonuçlara göre öğretmenler Rehberlik ve Özel Eğitim, Ulusal ve Uluslararası Sınavların Tanıtımı, Kişisel Gelişim, Öğretmenlik Meslek Bilgisi ve Eğitimde Teknoloji Kullanımı hakkında eğitime biraz ihtiyaçları olduğunu ve daha önce katıldıkları eğitimlerin yarısı ile ilgili olarak memnuniyet belirtmişlerdir. Bunlara ek olarak, katılımcılar hizmetiçi eğitim programlarının formatı için bazı tercihler bildirmişlerdir. Bütün sonuçlar birlikte ele alınarak tartışılmış ve öğretmen ihtiyaç ve tercihlerine dayanarak hizmetiçi eğitim programının tasarım öğeleri olarak biraraya getirilmişlerdir. Öğretmenlerin neye ihtiyaç duyduklarını, nasıl bir program tercih ettiklerini ve en iyi nasıl öğrendiklerini öğrenmek Türk hizmetiçi eğitim politikasının bu ihtiyaç ve tercihleri karşılayacak şekilde yeniden tasarımını ve geliştirilmesine katkı sağlayacaktır.

Anahtar Kelimeler: Mesleki Eğitim, Hizmetiçi Eğitim, Öğretmen Eğitimi

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TABLE OF CONTENTS

LIST OF TABLES

TABLES

LIST OF FIGURES

FIGURES

LIST OF ABBREVIATIONS

OECD	United Nations Development Program
NCLB	No Child Left Behind
MoNE	Ministry of National Education
ITD	In-service Training Department
SWOT	Strengths, Weaknesses, Opportunities and Threats
METU	Middle East Technical University
HSEC	Human Subjects Ethics Committee
EARGED	Research and Development Department of MoNE
EFA	Exploratory Factor Analysis
KMO	Kaiser-Mayer Olkin
ANOVA	Analysis of Variance
SEM	Structural Equation Modeling
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
RMSEA	Root Mean Square Error of Approximation
SRMR	Standardized Root Mean Square Residual
M	Mean
SD	Standard Deviation

CHAPTER I

INTRODUCTION

1.1 Background to the Study

> Standards for learning are now higher than they have ever been before, as citizens and workers need greater knowledge and skill to survive and succeed. Education is increasingly important to the success of both individuals and nations, and growing evidence demonstrates that—among all educational resources—teachers' abilities are especially crucial contributors to students' learning (Darling-Hammond, 2006, p.300).

As Darling-Hammond (2006) summarizes above, due to the recognition that teachers are the crucial element of the education system, teachers have become the focus of interesting every modern society. As is known by many educators, there have been rapid changes in the teaching profession. In recent years, changes in the teaching profession have affected almost all aspects of classroom life, influencing the philosophy of schools, developing new teaching-learning applications, changing the direction of research efforts, and putting heavy constraints and responsibilities on society with respect to ameliorating the problems of the educational system. In a society where changes are rapid and continuous, it is challenging to keep up with change and its consequences. Teachers are expected to keep up with change and to keep themselves up-to-date about the improvements, scientific developments, and educational reforms in the society. In other words, rapid development in science and technology, changes in social relations, and rapid globalization all force educators to redefine the role and characteristics of the teaching profession. Hence, heightened interest in teacher education in recent years has stemmed from the advent of powerful demand for highly qualified teachers, amplified by the demands and opportunities of globalization.

Herein, teacher education could be raised for discussion. While having a degree or certification in teaching thru/via a college education in teaching has been considered as one of the most important characteristics of qualified teachers (Glathorn, Jones, & Bullock, 2006), the striking question *Will the courses of teacher education programs be sufficient for teachers for the next twenty or thirty years they spent in teaching profession?* arises. However, this question has always been an overarching question; teacher education has been criticized in the literature in terms of misalignment between teacher education faculty and college programs with school programs (Bulut, Demircioğlu, & Yildirim, 1995; Cakiroglu & Cakiroglu, 2003; Cruickshank, 1996), the need for clearer cooperation between the schools and the training institutions (Coolahan, 2002), and lack of evaluation of teacher education programs with regard to the success of their graduates (Cruickshank, 1996). Hence, the idea of *additional education* arises. Heightened interest in the studies on professional development of teachers in recent years has stemmed from the gap between teacher education institutions and teaching reality in relation to lack of consistency between what is learned at college and the challenges of teaching in real classroom settings (Jarvis & Algozzine, 2006; Lindgren, 2005). It should be realized that the end of pre-service teacher education does not mean the end of the teacher learning and development process. At this point, the professional development of teachers, which can be defined as everything that teacher experiences from day one to retirement (Henderson, 1978), and which refers "to interventions and training to direct the evolution in professional behavior in a more desirable way." (Kelchtermans & Vandenberghe, 1994, p.45) comes to the top of the teacher educators' agenda. Some attempts in relation to teaching and learning have emphasized improvement of learning quality via improvement of teacher education as in the *No Child Left Behind Act* (2002) which focuses on high quality teacher education for high quality teaching and learning (Cochran-Smith, 2004) requires in-service training programs to support teachers' professional development.

As in other parts of the world, increasing the quality of teaching profession have always been central issues in Turkish teacher education. Improvements and their

impacts on teaching and learning lead universities to put tremendous efforts into improving the quality of teacher education programs and into increasing the number of highly qualified graduates. However, studies underline the fact that the academic courses taken during pre-service education do not meet all the needs of new teachers. Teacher education programs are not congruent with the practicalities of school life (Bulut, et al., 1995; Toluk, 1994); there is little or no pre-service teacher preparation that focuses on meeting the needs of rural students or on significant regional differences (Cakiroglu & Cakiroglu, 2003); even though prospective teachers are expected to spend hours to learn their subject matter and general teaching methods, the practicum -experience in how to teach subject matter- is relatively ignored (Altan, 1998). While in-service training of teachers has come to the top of the international agenda because of changing realities, new knowledge, and developments in science and technology, there are additional reasons to make this a top priority in Turkey. In Turkish context, these additional factors including the rapid increase in enrollment numbers in education faculties, as a result of the fact that being hired as a teacher at the end of an examination covering only general culture and teaching profession area questions, restructuring in primary and secondary education curricula, bring in-service training of teachers on the place of urgencies in the educators agenda. Hence, to raise the standards of teacher performance, the educators must provide supplementary education and/or training to improve the professional proficiencies and to grasp the new knowledge that are indispensable for practicing teachers (Brantner, 1964). To bridge the gap between insufficient teacher preparation and the national need for effective teacher performance in real school settings, every national education system must provide a robust design and delivery system for continuing in-service teacher education and career-long professional development (Desmarais, 1992).

As in pre-service teacher education, policy makers, school and district leaders, and researchers are all increasingly concerned with enhancing the quality of teachers' in-service training for a long time (Penuel, Fishman, Yamaguchi, & Gallagher, 2007). A significant amount of time, money, and effort is devoted to in-service training and education (Borko, 2004; Veenman, Van Tulder, & Voeten, 1994), but

with poorly understood results. Although there is a widespread view on the importance of staff learning, how design and process should be handled is still an issue to be questioned. At this point, the overarching questions arise; *"Who must determine these professional development programs?" "How must these programs be designed?" "Is the design of these in-service training programs planned in accordance with the real needs of audiences?" "How much are existing designs helpful for teachers to improve their existing knowledge and skills?"* and *"What are the most effective designs for teachers?"*

These kinds of questions have long been asked by designers, researchers and educators. Design as a formal discipline, has developed into "an artistic science" (Crawford, 2004, p.414). Dewey described design as a *linking science* between learning theory and educational practice (Reigeluth, 1983). Design generally refers to the analysis of learner characteristics, pre-existing learning and performance problems, and the design, development, implementation, evaluation and management of instructional and non-instructional processes, and intends to improve learning and performance in a variety of settings, institutions and the workplaces (Reiser, 2007).Program design has philosophical, theoretical and practical backgrounds. Since philosophical, social, and political stand will affect all components of a program, it is better to determine the sources of this stand before designing a program (Ornstein & Hunkins, 2004). Tyler (1949) described three sources of ideas as knowledge, learner, and society. Similarly, Doll (1996) identified four sources of a program design: science, society, eternal and divine. For most of the design models the initial step of this process is to analyze these sources to clarify bases of a program. Therefore, the driving force of this study was to find answers to such kind of questions by taking the first step of design models; *analysis of learners as a source*. It was believed that the answers of such questions would establish a base for the following steps of professional development designs like defining aim and purposes, stating objectives, deciding on content, materials and resources, teaching methods and assessment and evaluation techniques. Although some does not accept learners as a key in forming a program, some thinks that the program should be based on what is known about

learners; how they learn, shape attitudes, raise interests, and develop values (Ornstein & Hunkins, 2004). In this study, it was also believed that one of the most important sources that could give the best answers to these kinds of questions, are learners themselves.

1.2 Purpose of the Study

There has always been pre-service teacher education and in-service teacher training, and they will be. However, what changes with the time is the existing purpose, and philosophy underlying designs, which shape the contents, forms, and audiences of the programs. It is widely accepted that there is a gap between what is learned in pre-service education, and what is experienced in real classrooms, and there are some problems arisen from this gap. To cope with the problems arisen from pre-service education, in-service teacher training programs are designed by faculties of education, ministries of education, and NGOs. However, *how these designs are effective for teachers who face with the challenges of 21st century*, and *what type of in-service training designs teachers of 21st century need* are somehow obscure. Assuming the major aim of the efforts as to improve the quality of teaching and learning, the main purpose of this study was to determine the kinds and qualities of in-service training that Turkish teachers report that they need. Learning what teachers report that they need and prefer and how they learn best will make it possible to provide some suggestions for Turkish in-service teacher training policy to maximize the match between teacher needs and the content and process by which those needs are met. To achieve this purpose the following two major research questions with sub-questions guided the study:

1. What sorts of in-service teacher training programs do teachers need?
    1.1. To what extend do teachers report their need about in-service training in the following domains:
        i. professional teaching knowledge,
        ii. content area knowledge,
        iii. technology use in education,

iv. preparation for national and internationals exams,
v. guidance and special education,
vi. communication and social skills,
vii. development of social consciousness,
viii. self-development

1.2. What are teachers' expressed preferences about in-service training program characteristics including content, instructors, schedule and location, participants, and forms of evaluation of in-service training programs?

2. What are the predictors of teachers' reports of their in-service training needs in different domains of teachers' professional development?
   2.1. Are there significant mean differences in teachers' reports of their in-service needs related to factors such as gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type?
   2.2. Are there significant mean differences in teachers' reports of their in-service training program preferences related to factors such as gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type?
   2.3. How do teachers rate the appropriateness and effectiveness of in-service course content, instructors, organization, training centers, participants, and assessment and evaluation methods?

To ensure the quality of a program or instruction, systematic development of instructional specifications is essential. There are many design models to choose before developing a program. But almost all designs start with analysis of existing conditions, context, and needs of learners as in the design models of Morrison, Ross and Kemp (2004), Dick and Carey (1990), Posner and Rudnitsky (2006), Smith and Ragan (2005). Although this study did not follow any specific design model, it had a nature of analyzing of learners' characteristics, which is a preliminary step of nearly all design models. Heinich, Molenda, Russell, and Smaldino (1999) recommended designers to consider three categories of learner

characteristics: general characteristics (gender, age, experience, and education), specific entry characteristics (prerequisite skills and attitudes), and learning styles. In this study, general characteristics of learners, and their needs and preferences were attempted to explore.

In investigating characteristics of learners, the existing literature guided this study. In the literature there are different kinds of frameworks that might be followed by the designers of professional development (Fishman, Marx, Best, & Tal, 2003). Learning Forward (formerly National Staff Development Council) (2001) presented three categories for a professional development design; content, process, and context. On the other hand, Loucks-Horsley, Hewson, Love, and Stiles (1998) proposed fifteen strategies for designing of a professional development, which can be combined in to context and critical issues of school. From another viewpoint, Fishman et al. (2003) argued four basic elements of a design; content, strategies, place, and media used for professional development. However, in this study, three main elements grounded on teachers' needs and preferences were explored, which were *content, form,* and *audiences* of professional development. *Content* refers what professional development designer expect teachers learn; *Form* denotes the context, strategies, materials, schedule, and evaluation in which professional development takes place; and *Audiences* are targeted group of teachers who needs to be participate some certain professional development programs.

1.3 Significance of the Study

This study is significant in multiple ways; exploration of teachers' in-service training needs and preferences, proposing in-service training program characteristics based on teachers' needs and preferences, presentation of a report on the initial evaluation of previous in-service training programs, and on the further needs of faculty of education students' after graduation, and development of an in-service teacher needs survey for Turkish context.

To design effective programs of professional development, it is necessary to build empirical evidence base that links different forms of professional development (Fishman et al., 2003). Considering the simplistic instructional design model ADDIE which emphasizes five steps of instructional design process namely analyze, design, develop, implement and evaluation (Crawford, 2004), this study can be acquainted as an initial step of designing an in-service teacher education programs since the purpose of this study was to analyze in-service training needs and preferences of teachers. In this research, the content was to be tried to gain insight as well as the form of professional development in order to provide empirical base for future designs of professional development. This study was an attempt to contribute to the literature by documenting the reports of practicing teachers about the characteristics of effective in-service training that they have actually experienced in Turkey. As Sexton, Synder, Wolfe, Lobman, Strickler, & Akers (1996) report, few studies examine the design, implementation, and documentation of in-service training. Furthermore, it is believed that this study provides important data about in-service training needs and expectations of teachers in primary schools. According to the literature, teachers in Turkey have limited opportunities to improve their knowledge and teaching skills in many areas of the teaching profession (Altan, 1998; Gediklioglu, 2005). This study can contribute essential knowledge about what reported by teachers that can be used to help teacher educators and administrators to develop a program for in-service teacher training that could support teachers' understanding of new curricula more effectively and reduce problems in the teachers' adaption and adoption of new school programs (Anilan & Sarier, 2008; Bal, 2008; Bikmaz, 2006; Sahin, 2008). Since design characteristics and activities implemented in schools that make in-service education effective are still unclear (Veenman et al., 1994), the findings stemming from this study's analysis of teacher reports may provide promising indications of the crucial features of effective in-service training programs that have been provided by the Turkish Ministry of National Education.

Based on the aforementioned issues, this study aimed to shed light on the reported efficiency of in-service training in Turkey. Accordingly, exploration of the

concerns of the primary school teachers involved in the innovations is also essential for getting clues about the initial evaluation of the in-service training programs (van den Berg, Sleegers, Geijsel, & Vandenberghe, 2000). Therefore, this research can be considered as a preliminary evaluation of in-service teacher training programs in Turkey in multiple dimensions. Despite some promising findings reported in the research literature (Eksi, 2001; Erisen, 1997; Gursimsek et al., 1997), research on the effectiveness of the in-service teacher education programs and what kind of in-service teacher education program(s) are needed nationwide is still in its infancy. Furthermore, even though there are many studies focusing on design and development of school curricula, there are very few studies concentrated on teacher professionalism, and the literature lacks development of professional curriculum (Stuart & Tatto, 2000).

The knowledge about teachers and their experiences gained from the study could provide opportunities for other researchers to design effective and appropriate in-service teacher education program models. When considering the five general categories of teacher education scholarship; survey research, case studies of teacher education programs, conceptual and historical research, studies of learning to teach, and examinations of the nature and impact of teacher education activities including self-study research (Zeichner, 1999), this study is similar in many respects to studies that model an in-service training program with respect to teacher needs, preferences, and previous experiences.

It is possible to consider this study as a report for faculties of education about their students' further needs after graduation. Since the feedback of stakeholders is crucial for the educational managers, designers, developers and instructors (Wong & Yeung, 2003), another contribution is its intention to enable education faculties to get more information about the challenges that their graduates face and about their perceptions of the sufficiency of their pre-service training. Consequently, this study aimed to provide information to two important stakeholders in teacher education: Higher education institutions and the Ministry of Education.

To sum up, documentation of the self-reported in-service needs of teachers can provide insights and data that can be used to improve the existing situation and to provide a strong basis for taking more effective and meaningful action in support of teachers in the schools. This will also help designers of professional development in deciding about the other steps of design processes. That is, the decisions will be dependent on the results of this initial step which is an empirical evidence and base for the later steps of professional development designs.

1.4 Definition of Terms

Pre-service Teacher Education: The preparation of teachers in higher education institutions before they start working as certified teachers.

In-Service Training: All activities aiming to support workers' improvement their profession (Harris, Bessent, & McIntyre, 1969).

Professional Development: Processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students (Guskey, 2000, p.16).

In this study, the terms in-service training and professional development were both used the same meaning throughout the research.

Need: The gap between the expectations and the existing situation (Morrison, Ross, & Kemp, 2004).

CHAPTER II

LITERATURE REVIEW

In this chapter, the review of the literature related to the aim of the study is presented. The following issues are discussed based on the literature: Need for further designs of in-service training programs, in-service teacher training programs with respect to teachers' needs in terms of content and form of in-service training programs, and the predictors of in-service training needs with regard to audiences of in-service training programs, and previous in-service training experience of teachers.

2.1 Need for Further Designs

> In-service training … includes everything that happens to a teacher from the day he takes up his first appointment to the day he retires which contributes, directly or indirectly, to the way in which he executes his professional duties. (Henderson, 1978, p.11)

The answer of the question "who is the teacher?" shows variety: Teacher is the representative of social and ethical authority (Dewey, 1903); is the key to change in education and development of schools (Hargreaves, 2000); is the one who makes a difference in the lives of students (Aksu, Demir, Daloglu, Yildirim, & Kiraz, 2010); and is a curriculum leader (Beane, Toepfer, & Alessi, 1986). Such a diverse teacher definition makes the definition of teacher education more complex. Today we know more about what a good teacher knows and does (Berliner, 1984; Brophy & Good, 1986; Gage, 1984; Rosenshine, 1986; Shulman, 1986), but comparatively little about how a good teacher is educated. However, it is possible to define the teacher education. In the most general way, Moyles and Robinson (2002) divide teacher education into two stages, namely, pre-service teacher education and in-service teacher education. Randi and Zeichner (2004) describe teacher learning as in-service and pre-service teacher preparation programs,

separating teacher education into before and after categories. In addition, Wyatt and White (2007) describe two stages of teacher education by explaining that becoming an effective teacher is composed of two important phases starting with student teaching and continuing with lifelong learning until retirement. Accordingly, Kelchtermans and Vandenberghe (1994) state "The end of a teacher education programme does not mean the end of the training process and the achievement of competence" (p.45). As referred to these definitions, it is possible to conclude that teacher education is an endless process that refers to not only pre-service education but also in-service teacher training.

By the beginning of the 21st century, many educational systems have been faced with the challenge of coping with the diverse and accelerated changing student population (Cruz & Arias, 2007). There are not only changes on student characteristics, but also there are many changes on the needs and expectations of the society. In this instance, it is clear to say that needs of the teachers have always been changing. The abilities and characteristics of the teachers who meet the highest standards for student learning, which are knowledge and skills for being successful in the current century (Brophy & Good, 1986; Cruicshank, Bainer, & Metcalf, 1995) must now be adjusted to meet the demands and opportunities of the twenty-first century. In another words, with the changes in science and technology, educational reforms and new policy initiatives, nations realized that the quality of education highly depends on the quality of teacher education (Simsek & Yildirim, 2001). For instance, in recent years, educational professionals have been trying to meet the needs of those teachers, who have to be informed about and prepared to teach reformed curricula, catch up with new technologies, cope with the increasing rate of smoking, sexual problems and drug usage. Societal changes confront teachers with new and different demands. Since the reforms and changes in the society have been undertaken by researchers and teacher educators in attempt to adapt curricula, school, and teachers to new demands, a consensus on the importance of professional development exists. Guskey (2002) emphasizes the importance of professional development, stating that "High-quality professional development is a central component in nearly every modern proposal for

improving education" (p. 381). Similarly, Buchberger, Campos, Kallos and Stephenson (2000) support the call for high quality teacher education to achieve high quality education and training. Even though many acknowledge its importance, typical in-service teacher education consisted of brief workshops with unclear goals and little continuity until the 1970s in the USA. In-service teacher education became a stronger priority for American colleges of education in the early 1970s with the new availability of funding support for new and more effective types of in-service training. This continued with the *Rethink In-service Education* conferences, publications and finally the National Council of States on In-service Education organization was founded in 1976 (Hite & Howey, 1977). Since that time, drawing on extensive research on school effectiveness and improving instruction practices, attention on staff development at the schools has increased (Brophy, 1979; Guskey, 1985; Smith, 2005). To illustrate, Guskey (1985) investigated whether teachers who took in-service training implement more effective instructional practices or not, and found that teachers who were involved in in-service teacher training gave more importance to teaching practices. In the same line, Purdon (1999) implies that in raising teaching standards, the key is "career-long professional development" (p. 943). Furthermore, the experimental studies, Jager, Reezigt, and Creemers (2002) and Kealey, Peterson, Gaul, and Dinh (2000) showed that, with appropriate training, teachers could change their behavior and ideas on teaching and learning. Similarly, Angrist and Lavy (2001) found in their matched-comparison design that the cost effective path to increasing pupils' test scores passes through teacher training. Moreover, a well-designed professional development program can ensure the success of school and policy reforms (Cakiroglu & Cakiroglu, 2003; Guskey, 2003; Sandholtz, 2002). Supovitz, Mayer, and Kahle (2000) found that intensive, inquiry-based professional development had impressive effects on teacher attitudes towards reform, their skill at adapting to reform, and the clarity of their thinking about the use of reform based practices. Lieberman (1996) also emphasizes the strong connection between school development and teacher development. Therefore, it can be possible to conclude that various efforts with regard to in-service teacher education have resulted in positive teacher outcomes in the literature.

In helping teachers to keep up with the changing times, continuing teacher education plays a vital role. In this sense, the nature of in-service training has changed from improving teachers' teaching skills to supporting teachers to be able to cope with dramatic changes in education and society (Desmarais, 1992). Similarly, Friedlander, Dreyfus, and Milgrom (2004) mention the basic method of supporting teachers for innovations is the in-service training programs, which are systematic attempts to promote change in classroom practices, in teacher attitudes and beliefs, and to improve learning outcomes of students (as cited in Guskey, 2002). In the context of lifelong learning, teacher education institutions and governments increased their support for in-service training during the last forty years for teachers who have had to seek to equip their students to be lifelong learners (Coolahan, 2002).

In this perspective, the *No Child Left Behind* (NCLB) Act of 2001 in the USA requires that all students should be taught by "highly qualified" teachers and states must ensure the availability of *high-quality* professional development for all teachers. Similarly, *Teaching at Risk: A Call to Action*, a report released by The Teaching Commission (2004), reminds us that teaching is the USA's most valuable profession, and advocates strongly that "helping our teachers to succeed and enabling our children to learn is an investment in human potential, one that is essential to guaranteeing America's future freedom and prosperity" (p. 11). In-service teacher training in relation to its vital role and its characteristics after pre-service teacher education are also highlighted by the OECD as:

> Improved planning, more involvement of teachers, better evaluation and dissemination will all strengthen the concept of professional development which must be seen to begin with pre-service and continue through a teacher's career. Professional development is not simply an "add-on" or a "quick fix" to be applied when a particular problem arises. (OECD, 1998, p.56)

The OECD also focuses on the importance of external support to the in-service training of teachers from higher education institutions, education centers, and regional or specialist support teams. However, despite the acknowledged

importance of in-service teacher training, none of the OECD countries devotes more than two percent of their education budgets to in-service training of teachers.

Let the focus turns to the Turkish context, in-service training of teachers was started with the foundation of the Bureau of Teacher Training on the Job in 1960, which was transformed to the In-service Teacher Training Department in 1975. Corresponding with the primary and secondary education reform movements in Turkey, reform movements in teacher education started at the beginning of the 1990s (Grossman & Sands, 2008). According to regulations set in 1994 by MoNE, the aims of this department include the adjustment of pre-service teachers to new institutions, provide practicing of the National Turkish Education aims and principles in harmony, recovering the gap arisen from pre-service education, acquisition of skills and knowledge for educational development, promotion of willing and talented personnel, and helping to develop the education system (MoNE, 1994). Following these efforts, Higher Education Council updated the teacher education curricula in accordance with the National Education Development Project (Grossman, Onkol, & Sands, 2007). Teacher education programs were reformed to improve professional preparation rather than a more academic one, to promote collaboration among faculties of education and faculties of art and sciences, to strengthen the infrastructure of the faculties of education, to give more emphasis on school experience, to increase the number of faculties of education and capacities of departments, and create fellowships to attract academicians from abroad to Faculties of Education (Simsek & Yildirim, 2001). Despite these efforts, staff quality has still been a problem in faculties of education (Guven, 2007). In other words, these efforts are promising but they are not sufficient to educate teachers who are well prepared for life in classrooms in a continuously changing world.

Over the past decade, Turkey has been undergoing a process of educational reform. Concerning the changes in school system and curricula, one basic question should be asked by the government and Ministry of National Education (MoNE): What kind of support do teachers actually need to put an innovation into practice?

To answer this question, the MoNE has been offering in-service training courses and seminars to teachers so that they can adopt and adapt to the new curricula and its practices, and to help teachers promote the reform acts (Guven, 2007). In other words, if teacher preparation and proficiency are vital components of education reform, then successful professional development programs should be taken into account as important as pupil learning (Sandholtz, 2002). That is, if the main concern of education reforms is success of school curricula, which mostly depends on effective teacher performance, then professional development of teachers will be a key means to achieve these national goals (Cakiroglu & Cakiroglu, 2003).

There is no doubt that teachers' professional development is also a hot topic nowadays in Turkey. A school-based in-service training program was developed by the MoNE in 2005 and piloted in 2006 as part of the support to the Basic Education Project. The professional development of teachers was one of the strategic objectives declared by World Bank's 2005 report: "Develop an integrated program for teacher education and professional development". Furthermore, World Bank put heavy emphasis on the need for initial training, induction, support and continuing professional development for teachers (World Bank, 2005). Therefore, while there were two in-service training activities with 85 participant in 1960, this number was increased to 21 128 activities with 479 436 participants in 2011. MoNE also reported that the in-service training time was 19.7 hours per person in 2011 (MoNE, 2012). Although there are encouraging improvements on the number and kind of activities, and the quantity of the funds devoted for teachers' professional development programs, the effectiveness of these programs accordingly their designs, implementations, and follow-up issues have still been questioning by educators and researchers (Catmali, 2006; İpek & Ucar, 2006; Oztaskin, 2010; Selimoglu & Yilmaz, 2009). Hence it is possible to conclude that despite these various efforts of devoting enormous human resources, money and time spent in programs, in-service teacher training programs are not found as effective as expected.

2.2 In-service Training Programs with respect to Teacher Needs

> "Teaching as an occupation to that strongly involves the teacher as a person."
> (Kelchtermans & Vandenberghe, 1994, p. 46)

Teachers mostly appeal to the professional development program which helps to expand their knowledge and skills, and to enhance their growth, and effectiveness (Guskey, 2002). In this sense, the important thing is that teachers need to attend what they need to be more effective and develop their skills. Darling-Hammond and McLaughlin (1995) point that it is imperative that teachers have to have opportunities to discuss and express their needs. At this point, exploring the needs of teachers is a good start point of developing a qualified professional development program. Fishman et al. (2003) report that teacher needs change in accordance with the change in basic theory and approaches. To illustrate, shift from direct teaching to different types of teaching approaches like inquiry-oriented approach, constructivism or project-based learning demand different classroom management skills, knowledge organization, and assessment techniques. Therefore, to explore the best professional development design, it is necessary to examine the particular needs of different teachers while determining on the contents and characteristics of a training programs.

2.2.1 Content of In-Service Training Programs

It was found that teachers generally talk about themselves while talking about their job (Nias, 1989). Owing to this conclusion, teaching profession can be considered as teachers themselves. Therefore, the question of "What should be learnt by teachers?" can be best answered by teachers themselves. What they need to learn to develop their personal skills and knowledge, is the answer of what the target content of in-service teacher training programs is. In general there are two main categories of content of in-service teacher training programs; (a) knowledge related - general teaching contents like assessment, management, organization, teaching methods (b) knowledge and skill related - subject matter contents including laboratory and technology usage (Margerum-Leys & Marx, 2002).

Vukelich and Wrenn (1999) conclude that effective in-service training programs should give attention to single subject. Similarly, Desimone, Porter, Garet, Yoon, and Birman (2002) suggest that one of the six important aspects of highly qualified training programs is content focus that gives emphasis on not only pedagogy but also the subject matter. Correspondingly, Abdal-Haqq (1995) proposes that an effective professional development should be based on the knowledge centered for teaching. Furthermore, according to Fullan and Miles (1992) teachers expect to find practical ideas which can be directly associated with daily operations in their classrooms. On the other hand, Little (1988) nominates characteristic of a qualified teacher development as being focused on fundamental problems of curriculum and instruction. According to Ball (1996), involving how to integrate follow-up activities and reflections is one of the features of an effective professional development model. Moreover, Guskey (2003) proposed that the most frequently cited content need for in-service training is associated with reform initiatives and model of high-quality instruction. It can be possible to say that literature suggests designing in-service training programs on subject area knowledge of teachers as well as professional teaching knowledge, which focus on single subject and address to real classroom cases.

There are some case studies that explore the in-service training content needs of teachers in the literature; Karagiorgi and Symeou (2007) mentioned that teachers in Southern Cyprus primarily need trainings content on student motivation, computer and information techniques, new techniques and methods in teaching, educational reforms and current education programs. In another study, Fok, Chan, Sin, Hg, and Yeung (2005) drawn the picture of Hong Kong and concluded that teachers need in-service training mostly on innovative instructional techniques, school-based curriculum development, self-development, program adaptation, project-based applications, guidance on student development, and instructional applications of information technologies. The study conducted in Missouri pointed some competencies that teachers needed were completing reports for local/state administrators, motivating students to learn, developing an effective public relations program, preparing proficiency award applications, integrating science in

to curricula, utilizing a local advisory committee, using computers in classroom teaching, supervising students, and teaching with experiments (Garton & Chang, 1997). Furthermore, European Union (2007) reports that teachers in the union need to learn how to integrate new technologies into their classroom settings.

In Turkish context, Erisen (1997) studied on the in-service needs of vocational technical school teachers and the results showed that teachers needed in-service training on instructional principles and methods, educational technology, and measurement and assessment. In her study of investigating in-service needs of social studies teachers, Oztaskin (2010) studied with 200 social studies teachers and found that they mostly needed in-service training on the material and activity development, the usage of materials and the contemporary issues in social studies education. Additionally, other research studies showed that there was a discrepancy between the learning of prospective teachers from teacher education faculties and the experience of teaching in real classrooms (Yalcinkaya, 2002). Moreover, Gokce (2010) and Uney (2006) found that the teachers who graduated from the departments other than education needed in-service training on preparing yearly plans, preparing for course sessions, providing instructional materials, managing and teaching in crowded classrooms. In the same vein, Ozturk (2008) concluded that novice teachers need in-service training program that contains following content confronting the adaptation challenges in the context of workload, social status identity, supervisor, and classroom management. In addition, teachers in Ozer's (2004) study stated that they needed in-service training programs to enhance their knowledge and perceptions on general education issues. Moreover, Baran and Cagiltay (2006) concluded that teachers reported a need for training programs that can be applied in real classroom cases. In a more recent study, Sahin (2008) carried out a research and the results indicated that there was an urgent need for in-service training programs for teachers about the assessment and evaluation processes, and techniques for implementing new curricula. Related with new programs, MoNE designed and implemented some in-service training programs. However, some studies show that many teachers did not have a chance to participate those seminars and courses after reforms. As well, the teachers who

were involved in the seminars and courses reported that the courses were not sufficient to inform them about the new curricula and about how teachers can implement the new curricula effectively (Anilan & Sarier, 2008; Bal, 2008; Remillard, 2005; Sahin, 2008). From the more general perspective, it was covered in OECD's TALIS report (2010) which was based on the teachers of lower secondary education and the principals of their schools in Turkey that the areas of most urgent development need of teachers were teaching students with special learning needs (28%), information and communication technologies teaching skills (14%), teaching in multicultural setting (14.5%), and student discipline and behavior problems (13%).

2.2.2 Form of In-Service Training Programs

Form of in-service training programs can be divided into two categories; (a) traditional site of in-service training programs including after-school training sessions, summer workshops, conferences, consultations, or graduate coursework (b) other types of sites including colleague visits, online professional development tools, teacher centers, critical friends, peer coaching, action research, or story telling (Ball & Cohen, 1996; Fishman, Marx, Best, & Tal, 2003; Lieberman, 1996). From another viewpoint, Lieberman (1995) divided teacher development into two types of activities; (a) in-service activities given in a more formal nature which can be defined as direct teaching - unattached to classroom life (b) teacher development activities ties with student-centered pedagogy, are offered in favorable and durable conditions. These two classifications of types of programs give clues about possible forms of duration, schedule and teaching methods of in-service training programs. However, the dominant mode of in-service teacher training is still the former one.

Whatever the types of form used in modeling the training programs, researchers identified some certain aspects of a qualified model. Vukelich and Wrenn (1999) point that to be an effective, in-service training programs should focus on the teacher needs; be sustainable; involve teachers in raising answers to real-life

problems; offer for teachers engagement; help teachers to build up collaborative relationships; and motivate teachers to reflect on their teaching. Additionally, Desimone et al. (2002) also identify six key aspects of high quality professional development programs: 1) reform the type of professional development (more than just sitting in a lecture), 2) duration (the longer the better), 3) collective participation (as many from the same community or school as possible), 4) active learning (learning by doing), 5) coherence (making connections with real classroom contexts), and 6) content focus (focus on subject matter content, not just pedagogy). Little (1988) comes up with similar set of characteristics of an effective professional development program which should enable collaboration, involve collective participation, process long enough to make sure knowledge, skill and confidence development, be congruent with professionalism and collegiality. Correspondingly, collective participation and collaboration which provide many opportunities for teachers like discussion of ideas, sharing experiences about problems, concepts and skills, developing common understanding of curriculum, instruction, goals, methods, and problems (Garet, et. al, 2001; Guskey, 2003; Loucks-Horsley & Matsumoto, 1999), are growing interests in in-service teacher training. As another point of view, Abdal-Haqq (1995) claims qualified professional development model should be ongoing, consist of training, practice and feedback, be school-based and job-embedded, be collaborative, give room to student learning, promote school and teacher initiatives, be accessible and inclusive, support constructivist approaches, and serve adequate time and follow-up support. Ball (1996) recommends that long term support, coaching teachers in their own classrooms, and ongoing interactions with colleagues are some of the essential features of designing an effective professional development model. On the other hand, Cohen, Raudenbush, and Ball (2003) point out the need for well-defined and clearly specified programs regarding academic tasks, instructional materials, teaching methods, and student outcome to ensure its effectiveness. From different viewpoint, Lieberman (1995) focuses on the essential role of partnerships, coalitions, and networks on teacher development compared to “one size fits all” orientation strategies (p.73) which are just a “transmission model from experts to teachers” (Lock, 2006, p. 665). In short,

it can be possible to summarize the components of in-service training program that found qualified in the literature as being collaborative, ongoing, supportive, devoting room for teachers' needs, having clearly specified objectives and tasks, job-embedded, and focusing on single subject which is not only professional teaching knowledge but also the subject matter.

In Turkish context, Selimoglu and Yilmaz (2009) suggest that in-service training should be planned using principles of continuity, comprehensiveness, eagerness, participation, appropriateness, encouraging environment to achieve the desired goals and objectives. Moreover, to reach more qualified in-service training, more effort should be exerted, financial support should be provided, and future needs should be analyzed (Salin, 2002). Altun and Gok (2010) studied on the teacher training program to figure out teachers' needs, and their expectations. By utilizing the conjoint analysis with 131 teachers from Ankara, researchers found that the important features of the in-service training were highly related with (from most important to the least one) "when the training is done", "the place of the training", "the person who gives the training", "method of training", and "the topic of the training". The order of the importance the determined features showed changes with respect to gender and teaching experience. While male teachers signed "the time of the training" as the most important feature, female teachers prefer "the place of the training". On the other hand, less experienced teachers gave the most importance to "the time of the training" while more experienced teachers prefer "the place of the training". Therefore, all these findings signify that there is a need for appropriate additional support for teachers who are both novice and experienced, who are graduated from the departments of both faculty of education and other than the faculty of education, and who are exposed to curricular change and innovation. It is possible to say that teacher with different characteristics have different preferences about the form of in-service training programs.

2.3 Predictors of In-service Training Needs

In the present study, to predict in-service training needs of teachers, the characteristics of teachers that may cause differences, and previous in-service experiences of teachers that may affect their current needs were examined. The following sections present the existing literature on these issues.

2.3.1 Audience of In-service Training Programs

In the literature review, although there is enormous amount of studies that search for professional development programs' effectiveness, teachers' views on quality of in-service training programs with respect to some characteristics of teacher, there is limited evidence on the certain type of teachers who need certain type of in-service training programs. However, according to Brantner (1964) teachers' needs are arisen from teachers' age, teaching experience, subject matter, and type of teacher certification program. Therefore, it can be concluded that nearly all type of teachers need at least some kind of in-service training.

According to Shann (1998) professional development to promote student achievement is needed by both new and veteran teachers. Furthermore, new teachers have different in-service training needs than experiences teachers regarding adjustment, developing self-identity, how to address specific student needs, how to study the outcomes of their practice (Ball & Cohen, l999; Edy, 1969; Featherstone, 1993; Griffin, 1987; Johnson & Kardos, 2002). On the other hand, the novice secondary career teachers, who entered the profession from alternative faculties or certification programs, generally need to be prepared in pedagogy compared with others (Ruhland & Bremer, 2002 (a), (b)). Furthermore, Houston, Marshall and McDavid (1993) also found that these teachers have difficulties in the classroom more than other teachers. Teachers' professional development needs also show differences for certain contents. To illustrate, the need for computer and technology usage/comfort, teacher in-service training needs differ with respect to teachers gender (Yuen & Ma, 2002). Similarly, Clarke

(1990), Hursen (2012), and Ross, Hogaboam-Gray, and Hannay (1999) remarked the gender differences on development of computer skills, confidence in ICT instruction and attitude towards professional development activities.

Professional development needs may vary among the teachers who work in rural and urban schools. To illustrate, stress level and burnout level of teachers are higher in the rural school and these teachers need more support than the teachers working in urban schools (Abel & Sewell, 1999; Farber, 1984; Rottier, Kelly, & Tomhave, 1983). To illustrate, Yarrow, Ballantyne, Hansford, Herschell, and Millwater (1999) suggest an in-service training on the value of rural areas, for the teachers who work in rural schools to retain them in rural life. Accordingly, working in urban or rural schools, facing with socio cultural differences, confronting with large class and school sizes, and poverty of education are also other variables that have effect and challenge on the teachers' classroom applications (Akar, 2010) which may lead to differentiate in-service training needs of teachers.

In teacher education literature, there are many studies focusing on the needs of teachers in Turkey. To illustrate, Eksi (2001) in his study aimed to figure out the in-service needs of school headmasters, and found that female headmasters needed more in-service training then the male headmasters. On the other hand, there was not a significant difference on the in-service training needs of headmasters due to their seniority and school type they work. Moreover, the teachers who were graduated from the departments other than education have faced many problems in terms of preparing yearly plans, preparing for course sessions, providing instructional materials, managing and teaching in crowded classrooms (Gokce, 2010; Uney, 2006). Effective collaboration between Ministry of National Education and Higher Education Council is a problem both for novice teachers who face new situations in the real classrooms, and for experienced teachers who have to deal with innovation and change in school curricula, administrative regulations, and psychological problems (Bulut et al., 1995; Toluk, 1994). In the same vein, Ozturk (2008) found that novice teachers had to confront the adaptation

challenges in the context of workload, social status identity, supervisor, and classroom management. Hence, it can be possible to conclude that teachers' in-service training needs show variety with respect to certain variables such as gender, teaching experience, subject area, teaching certificate program, education level, school size, and residential area.

2.3.2 Previous In-service Training Experiences of Teachers

Any professional development program aiming to promote teacher and student learning requires an evaluation process as an integral part (Linn, Gill, Sherman, Vaughn, & Mixon, 2010). As another trend, to meet the new expectations and demands, researchers have introduced different kinds of methods for evaluating effectiveness of the courses and instructional techniques (Aleamoni & Hexner, 1980). The evaluation of the courses and programs have not only instructional dimension, but also political and administrative ones since there is a need for decision making about the program itself, instructor, place, etc. (McCallum, 1984). Therefore, owing to its importance and necessity, there are a significant number of the studies focusing on the evaluation of in-service teacher programs in the literature. Some of studies in the literature resulted in negative ways but the most widely cited result was the improvement of teachers' content and pedagogical knowledge (Guskey, 2003). In this context, in her meta-analysis study Wade (1985) found that in-service training programs in the literature were moderately effective. On the contrary, Kealey et al. (2000) asserted that the implementation failure has still been a common problem determined in the literature. In other words, there are many studies in the literature indicated that in-service training did not reach its objectives (Guskey, 1986; Fullan, 1991). The failure of in-service training programs have two important factors which have stemmed from not taking into account of motivate factors of teachers to professional development, and the process of teacher change (Guskey, 1986). On the other hand, Darling-Hammond and Ball (1999) propose that there is insufficient systematic professional development for teachers even though policymakers are generally aware of its significance on teacher effectiveness. Similarly, despite the importance, teachers

perceive in-service training as a separate or distinct event from the daily work (Fullan, 1995) which can be though as another factor of failure. Owing to these results, it can be accepted that there are both positively and negatively resulted studies in the literature.

According to MacDonald Grive and McGinley (2010), successful completion of continuing professional development program in Scotland leaded teachers to evaluate the program in a positive way in terms of improving learning and understanding theory with practice, and increasing competence in pedagogy. Birman et al. (2000) surveyed more than 1000 teachers who participated in a federal government sponsored professional development program and found that new reform type of in-service training activities like study groups, teacher network, research project, and teacher resource center were more effective since they were more focused, consistent and facilitate active learning. Furthermore, collective participation is evaluated as another important characteristics of effective training program; participation of teachers from the same department, subject or grade were more likely to found effective since it fosters active involvement of teachers (Birman et al., 2000). On the other hand, in-service training courses focusing on a specific subject area rather than a generic content were found to be more effective by teachers (Birman et al., 2000; Borko, 2004; Cohen & Hill, 1998; Desimone 2002). In the same line with this, professional development activities which were consistent with the policies and teachers' professional experiences were found more effective and attractive (Birman et al., 2000). However, Barnett (2002) found unavailability of follow-up activities after training courses as a very important problem, and suggested providing follow-up activities for one or two-day seminars which are not enough to improve teacher knowledge and skills by themselves. Moreover, Desimone et al. (2003) performed a study with 207 teachers in 30 schools, in 10 districts in 5 states, determined that professional development components like involving activities that were aligned with standards, assessing teacher outcomes, continuing with improvement efforts, and coordination between post-secondary institutions and school districts were related to higher quality by teachers. In the Yoon, Duncan, Lee, Scarloss, and

Shapley's (2007) review, there was a positive finding about the effectiveness of professional development programs that have features like being intensive, sustained, job-embedded, and focused on the teachers' own subject matter. Similarly, Eylon and Bagno (1997) discuss the length of the in-service training, which should be long enough to acquire the innovation. From another perspective, Joyce and Showers (1980) state "to be most effective, training should include theory, demonstration, practice, feedback, and classroom application." (p. 379) Linn et al. (2010) conducted an action research to figure out the use of professional development knowledge in classroom settings, and found that there was a limited evidence about teachers' using the ideas learned in professional development program in their classroom settings. In this case, Sparks (2002) proposed that no one could demonstrate school effectiveness in schools characterized by unfocused and fragmented professional development efforts. Moreover, the European Union (2007) reports that only 11 states offer systematic in-service training programs and most of these programs lack coherence and continuity.

Until now, much of the research on in-service teacher education has focused on the link between features of professional development programs and their outcomes for teachers who were voluntarily participating in the research studies-volunteers who were highly motivated to learn or change (Supovitz & Zeif, 2000). However, the outcomes of studies of professional development programs that are mandatory for teachers are still unclear (Bobrowsky, Marx, & Fishman, 2001).

In the Turkish context, there are a few studies of the effectiveness of additional training programs. In Yildizlar and Kargi (2010), teachers satisfied with the in-service training program that they participated since they acquired new knowledge that was useful for their classroom applications. On the contrary, teachers have been complaining about the ineffectiveness of in-service training programs for a long time. To illustrate, teachers agreed on ineffectiveness of some summer seminars as an in-service training in 1970s (Akyüz, 2006). In more recent studies also showed that there are some design problems with in-service training programs. For example, in Oztaskin (2010), teachers reported that in-service

programs lacked congruence between the purposes and activities, were overloaded with program content, repeated well-known theories, had crowded class sizes, and used technology poorly or not at all. Similarly, Catmali (2006) explored the problems of in-service training on the program named "Educate for the Future" and the results showed that lack of needs analysis before the program had been started, the schedule of the program, being too comprehensive of books for teachers were the weaknesses of the program. Moreover, Ozer (2004) concluded that there were some organizational problems in in-service training programs in terms of selection of teachers, motivational factors for teachers, and school directors' negative attitudes towards teachers' in-service trainings. Similarly, Yalin (2001) gave emphasis on other organizational drawbacks with regard to crowded classrooms, inadequacy of course materials, not qualified and prepared instructors, undetermined instructional goals and objectives, inconvenient site of trainings, and limited course durations. In addition, Gursimsek et al. (1997) discuss in their study on the enhancing the academic knowledge of teaching staff through in-service training, increasing the variation and enrichment of in-service programs and subjects, providing the continuity of programs, supporting the buildings, and materials.

Lastly, the In-service Training Department (ITD) of Ministry of National Education carried out a SWOT (strengths, weaknesses, opportunities and threats) analysis and found that the weaknesses of the institution were "inadequacy of needs assessment, lack of follow-up and evaluation studies, not presenting encouraging features for educators and educational leaders, lack of short, medium and long-term planning because inadequacy of communication among ministry departments, not able to do a healthy planning because of density of target population and inadequacy in sources". On the other hand, the threats of the institution were found as "density of target population, limitation in economic and human sources, lack of coordination among some institutions, the perception of in-service training programs as a holiday by some institutions and people, geographical conditions and difficulty in transportation (ITD, 2011).

2.4 Summary

This chapter reviewed the relevant literature and studies of what in-service training is, what teachers need to know and how they need to learn, and what features an effective professional development program should have. Related literature indicates that the interest of educational institutions, governments, and teachers in powerful in-service training programs has increased (Fullan, 1993; NCLB, 2001; OECD, 2010; TC, 2004). There is a consensus on in-service training programs' vital role on the success of educational reform initiatives (Cakiroglu & Cakiroglu, 2003; Guskey, 2003; Sandholtz, 2002). Furthermore, it is undisputed that the quality of in-service training programs has a positive impact on student learning and test performance (Birman et al., 2000; Borko, 2004; Darling -Hammond & Ball, 1999; Guskey, 2002). Heightened interest is given by not only the educational institutions and governments but also teachers themselves. Teachers perceive professional development programs as the most promising means to professional growth (Fullan, 1982, 1991, 1993). Similarly, even though teachers are usually required to participate in professional development activities by school directors or government, most of them state that they are involves in in-service activities to become better teachers by contributing their growth and improving their effectiveness (Guskey, 2002). According to Huberman (1995), teachers see in-service training as a cornerstone in enhancing their competence and greater professional satisfaction.

The characteristics of effective professional development programs include: Engaging collective participation, training teachers from the same department, subject or grade, being aligned with standards, including a meaningful assessment component, continuing with improvement efforts, coordination between post-secondary institutions and school districts, being intensive, sustained and job-embedded, and focusing on the teachers' own subject matter (Birman et al., 2000; Borko, 2004; Cohen & Hill, 1998; Desimone, 2002; Eylon & Bagno, 1997; Yoon et al., 2007). In the light of these findings it can be concluded that in general effective professional development requires particular features like school-

university partnerships, collaboration, effective use of technology, and supportive policy and reform environments. Researchers propose many characteristics about the form of effective teacher development models. However, the content needs of in-service teachers are still unknown.

This literature review also confirms that highly effective professional development programs for teachers are the ones based on teachers' needs (Avalos, 2011; Darling-Hammond & McLaughlin, 1995; OECD, 2010; Vukelich & Wrenn, 1999). Professional autonomy of teachers while designing a training model is an essential feature. Ball (1996) reports that teacher determination of the shape and course of his or her own professional development is vital in the design of any training model. Furthermore, participation of a needed in-service training program may have significant results since this may increase teachers' motivation and interests towards in-service training programs.

The related literature contains a mix of large and small scale studies including evaluation of approaches to teaching and learning, teacher opinions on their pre-service and in-service education experiences. Furthermore, there is a growing literature describing the outputs of in-service training programs. Despite the size of literature, however, relatively little systematic research has been conducted on the design and implements features of in-service training programs that teachers need. In the literature, design is widely accepted as a formal science, "an artistic science" or a linking science that links science between theory and practice (Crawford, 2004, p.414; Reigeluth, 1983). There is enormous number of studies that focus on the design of some particular instructions and programs for primary or elementary schools, and colleges. However, it is difficult to meet with the step by step introduction of a design process of teachers' professional development programs and instructions.

To sum up, although there is a consensus on the importance of a systematic way of designing a program or instruction, there is limited number of studies focusing on the design processes of professional development programs. This dissertation,

therefore, was designed to describe the first step of teachers' professional development programs' design process. That is, the learner analysis was conducted to investigate the in-service training needs and preferences of teachers in Turkey. The purpose of this research was to collect data about Turkish teachers' views about their in-service professional development needs that could be used in the further steps of professional development design process.

CHAPTER III

METHOD

This chapter presents the methods used while conducting the present research study. It includes; overall design of the study, research questions, participants, data collection instruments, instrument development, pilot study, data collection, data analysis and limitations of the study.

3.1 Overall Design of the Study

This study has a survey design. In survey studies, the opinions of a large group about a particular topic are collected through use of a survey instrument (Fraenkel & Wallen, 2005). Survey method is one of the most frequently used approaches to get feedback on the effectiveness of teacher training programs (Wong & Yeung, 2003). In spite of the limitation that individuals generally are not aware of their areas of development in order to effectively analyze their needs (Wray, 1989), the survey method was chosen because of its potential of reaching large groups of people to get the opinions about their needs. Professional development studies typically involve collecting the opinions of researchers and teachers (Guskey, 2003). The purpose of this study was to determine the kinds and qualities of in-service training. Hence, to track what kind of in-service training which teachers need to and to determine how they evaluate the programs that they have participated, the questionnaire was the primary source of data.

Questionnaire forms were distributed to 1730 teachers who worked in public primary schools in 26 cities in Turkey. Data was collected during November and December, 2011. Both first generation (e.g., Analysis of Variance) and second generation (Structural Equation Modeling) data analysis techniques were utilized in this study.

3.2 Research Questions

The following two major research questions with sub-questions guided the study:

1. What sorts of in-service teacher training programs do teachers need?
   - 1.1. To what extend do teachers report their need about in-service training in the following domains:
     - i. professional teaching knowledge,
     - ii. content area knowledge,
     - iii. technology use in education,
     - iv. preparation for national and internationals exams,
     - v. guidance and special education,
     - vi. communication and social skills,
     - vii. development of social consciousness,
     - viii. self-development
   - 1.2. What are teachers' expressed preferences about in-service training program characteristics including content, instructors, schedule and location, participants, and forms of evaluation of in-service training programs?
2. What are the predictors of teachers' reports of their in-service training needs in different domains of teachers' professional development?
   - 2.1. Are there significant mean differences in teachers' reports of their in-service needs related to factors such as gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type?
   - 2.2. Are there significant mean differences in teachers' reports of their in-service training program preferences related to factors such as gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type?
   - 2.3. How do teachers rate the appropriateness and effectiveness of in-service course content, instructors, organization, training centers, participants, and assessment and evaluation methods?

3.3 Participants

The target population of the current study comprised all K-8 primary-school teachers who are primary school (grades 1 to 5), mathematics, science and technology, social studies, Turkish, and English teachers in public schools in Turkey. To manage practical issues such as time, transportation, and financing, the research proposal was submitted to Research and Development Department of MoNE (EARGED) and received generous project support. After getting support from EARGED, to ensure each member of the population has an equal and independent chance of being selected, *cluster random sampling* was decided as a sampling method of the study. To ensure the normality assumption, and to cope with the internal and external validity threats, simple random sampling methods were one of the best to choose. A sampling procedure was performed within this target population in two steps.

Selection of Cities: According to Ministry of National Education Statistics (2011), there were 26 sub regions of 12 geographical regions in Turkey. One city from each sub region was selected randomly to represent overall population.

Selection of Schools: The number of schools in selected cities was taken from Board of Ministry of National Education, Ministry of National Education Statistics 2010-2011. Tunceli was the city having the smallest number of schools in Turkey with 40 primary schools. The total number of schools in the selected cities was divided by 40 to determine the number of schools in the sample. Therefore, 352 primary schools from 26 cities were selected through simple random sampling. The names of the schools were retrieved from the web sites of each city's Directorate of Ministry of National Education. The schools were listed and selected randomly by employing simple random sampling software. Six volunteer teachers (lower primary school, mathematics, science and technology, social studies, Turkish, and English) in each school were identified to include to the study, which comprised 2112 teachers in total.

The number of schools in the sample and cities selected randomly are shown in Table 3.1. To collect the data, 2112 questionnaires were distributed to the selected teachers. Among 2112 teachers ultimately a total of 1730 teachers participated in the study with a return rate of 81.91%.

Table 3.1

Number of Schools and the Determined Cities in the Sample

Sub Regions	Randomly Selected Cities	Number of Public Primary Schools	Number of Randomly Selected Schools	Number of Teachers
1. İstanbul and around	İstanbul	1421	36	196
2. West Marmara 1	Edirne	152	4	24
3. West Marmara 2	Balıkesir	489	12	72
4. Aegean 1	İzmir	913	23	138
5. Aegean 2	Muğla	360	9	54
6. Aegean 3	Afyon	424	11	66
7. East Marmara 1	Bursa	568	14	84
8. East Marmara 2	Sakarya	376	9	54
9. West Anatolia 1	Ankara	912	23	138
10. West Anatolia 2	Konya	904	23	138
11. Mediterranean 1	Isparta	215	5	30
12. Mediterranean 2	Mersin	524	13	78
13. Mediterranean 3	Hatay	632	16	96
14. Middle Anatolia 1	Nevşehir	166	4	24
15. Middle Anatolia 2	Kayseri	530	13	78
16. West Black Sea 1	Zonguldak	293	7	42
17. West Black Sea 2	Kastamonu	272	7	42
18. West Black Sea 3	Amasya	194	5	30
19. East Black Sea	Giresun	234	6	36
20. North East Anatolia 1	Erzurum	951	24	144
21. North East Anatolia 2	Kars	419	11	66
22. Middle East Anatolia 1	Elazığ	328	8	48
23. Middle East Anatolia 2	Bitlis	450	11	66
24. South East Anatolia 1	Adıyaman	630	16	96
25. South East Anatolia 2	Şanlıurfa	1368	34	204
26. South East Anatolia 3	Şırnak	302	8	48
Total	26 cities	14027	352	2112

Among 1730 teachers, 52.4% of the respondents were female and 43.8% were male. Participants' ages ranged from 22 to 63 and had a mean of 40 years. The percentage of teachers teaching at lower primary school was 26.5%, Mathematics

was 14.3%, Science and Technology was 14.3%, Turkish was 15.0%, English was 14.1%, and Social Sciences was 14.0%. In addition, most of the participants (41.8%) have 0 to 5 years teaching experience. Table 3.2 displays other characteristics of participants.

Table 3.2

Demographic Information of the Participants

Variables		N	%
Gender			
	Female	907	52.4
	Male	758	43.8
Teaching Experience			
	0-5	724	41.8
	6-10	455	26.3
	11-15	263	15.2
	16 and more	259	15.0
Branch			
	Classroom Teacher	459	26.5
	Mathematics	248	14.3
	Science and Technology	247	14.3
	Turkish	260	15.0
	English	244	14.1
	Social Sciences	242	14.0
Graduation			
	Pre Undergraduate	98	5.7
	Undergraduate	1519	87.8
	Graduate	81	4.7
Faculty Graduated			
	Education	1396	80.7
	Other	334	19.3
Residential Area			
	City Center-Population 1 million and above	307	17.7
	City Center-Population under 1 million	207	12.0
	District	600	34.7
	Town	123	7.1
	Village	467	27.0
Work Type			
	Tenured	1539	89.0
	Other	191	11.0

3.4 Data Collection Instruments

Data was collected through a questionnaire in Turkish language entitled "In-service Teacher Training Survey", which was developed by researcher (see Appendix A). The first section was composed of demographic information. The second section included a scale of "In-Service Training Needs" which was a 5-point scale ranging from "never need" to "strongly need." The scale included the items generated from in-service training courses given by Ministry of National Education and courses from teacher education programs. Total number of items in this section is 52. Section III included a scale of In-Service Training Course Preferences developed as a 5-point scale ranging from "never prefer" to "strongly prefer." This section includes 28 items. The final section was developed as 5-point scale ranging from "not valid for any in-service training programs" to "valid for all in-service training programs" on the Evaluation of In-Service Training Courses. Total number of items in this part is 50. The scale development procedure is presented in detail in section 3.4.1.

3.4.1 Instrument Development

The data collection instrument has 4 sections: Demographic information, in-service training needs, in-service training preferences, and evaluation of in-service training courses. Following steps were followed to develop data gathering instrument:

First, previously conducted studies on in-service teacher training and other related resources (MoNE training courses 2011 catalog and teacher education courses) were reviewed. At the same time, preliminary interviews with primary school teachers (Mathematics, Science and Technology, English, Turkish, and lower primary school teachers) were conducted to determine basic themes of the questionnaire. At the end of this phase, an item pool consisting of numerous candidate items was constructed. During the second phase, items were categorized and headings were specified on the basis of previous studies and preliminary

interviews. Four sections were determined: demographic information, in-service training needs, evaluation of in-service training programs, and in-service training preferences. To ensure the face and content validity of the instrument, expert opinions were taken from 7 academicians from curriculum and instruction, elementary math and science, educational leadership and administration, and educational evaluation and measurement departments, and 6 teachers from mathematics, science, social studies, physical education, and English teaching, two experts from the In-service Teacher Training Department of Ministry of National Education Board of Education, and two district directors of the Ministry of National Education. After getting expert opinions on test items and general appearance of instrument, the number of items was decreased from 20 to 16 in the demographic information section; 72 to 52 in the in-service training needs section; 67 to 50 in the evaluation of in-service training programs section; and 29 to 28 in the in-service preferences section to remove redundant items.

In the third phase, after obtaining necessary permissions from METU Human Subjects Ethics Committee, Social Sciences Institute, and Ministry of National Education, the questionnaire was piloted with 460 primary school teachers. The instrument development procedure is summarized in Figure 3.1.

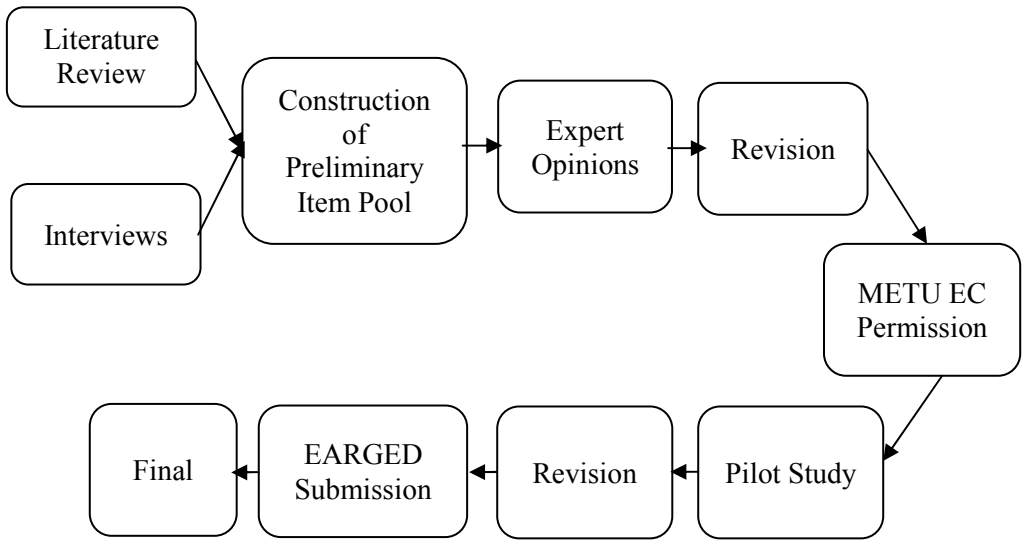

*Figure 3.1.*Steps followed to construct the data collection instrument

3.4.2 Pilot Study

The pilot study was conducted by administrating the instrument to 460 lower and upper primary school teachers in Konya. To examine the factor structure of the sections of questionnaire, an Exploratory Factor Analysis (EFA) was performed through SPSS 18. Before the analysis, the researcher checked the assumptions of the Exploratory Factor Analysis, which were: proof of metric variables, correlations above .30, Bartlett's Test of Sphericity, KMO (Kaiser-Mayer Olkin) value (>.60), multivariate normality, and absence of outliers (Hair et al., 2006). There was no correlation coefficient which was less than .30. The Bartlett Test resulted in a significant value which meant that correlation matrix was significantly different than an identity matrix, i.e., none of the correlations between the items were zero (Tabachnick & Fidell, 2007). Moreover, the KMO value exceeded the criterion value of .60. Before examining multivariate normality, univariate normality was checked by observing skewness and kurtosis values, significance of Kolmogorov-Smirnov and Shapiro-Wilk Tests and histograms with normal curves. The skewness and kurtosis values were between +3 and -3 (Tabachnick & Fidell, 2007), but Kolmogorov-Smirnov and Shapiro-Wilk Tests were significant, which indicated a distribution that differed from the normal distribution. Because the Kolmogorov-Smirnov and Shapiro-Wilk Tests are conservative tests, the researcher continued to examine univariate normality by checking histograms and noticed that univariate normality was not violated according to the histograms with normal curves. Cases that have Mahalonobis Distance values larger than the critical value were checked to detect multivariate outliers. Boxplots were also examined to determine whether there was any univariate outlier. It was seen that there were no serious outliers. These results showed that it is possible to continue the factor analysis.

The factor analysis for the section In-Service Training Needs resulted in 8 factors that accounted for 69% of the variance. These eight factors are named: *teaching professionalism, subject area knowledge, technology use in education, introduction for national and international exams, guidance and special*

education, communication and social skills, self-development, and *development of social consciousness*. After ensuring that the item loadings were greater than .30, the in-service teacher training needs section was composed of 52 items.

According to factor analysis results, it was not necessary to eliminate any items from this section. Each factor was analyzed separately to ensure the reliability of the scores. Cronbach alpha values greater than .70 show high internal consistency (Field, 2005). The Cronbach alpha coefficients of each factor were: .88, .91, .95, .90, .86, .90, .93, and .92 respectively. Table 3.3 shows the number items in each factor and Cronbach Alpha values of them.

Table 3.3

Factor Structure of In-Service Training Needs Section

Factors	Number of Items	Cronbach Alpha Values
Teaching professionalism	10	.88
Subject area knowledge	8	.91
Technology use in education	8	.95
Introduction for national and international exams	3	.90
Guidance and special education	7	.86
Communication and social skills	4	.90
Self-development	6	.93
Development of social consciousness	6	.92

The EFA was conducted for the Evaluation of In-Service Training courses section, and 6 factors were obtained that accounted for 79% of the variance in evaluation of trainings. The six factors were named: *instructors, training centers, evaluation of training, content of training, participants,* and *organization.* Including all items, which have item loadings greater than .30 yielded 50 items for the evaluation of in-service training courses section.

According to the factor analysis results, it was not necessary to delete any item from this section. Each factor was analyzed separately to ensure the reliability of the scores. The Cronbach alpha coefficients of each factor were: .98, .95, .96, .96,

.90, and .94 respectively. Table 3.4 shows the number items in each factor and Cronbach Alpha values of them.

Table 3.4

Factor Structure of In-Service Training Evaluation Section

Factors	Number of Items	Cronbach Alpha Values
Instructors	17	.98
Training centers	7	.95
Evaluation of training	6	.96
Content of training	9	.96
Participants	5	.90
Organization	6	.94

3.5 Data Collection

After the scale was developed, necessary documents were submitted to the METU Human Subjects Ethics Committee (see Appendix B). Following committee approval, pilot study was conducted. After analyzing the pilot data, the proposal was presented to the EARGED to get necessary permissions and support for the study. EARGED agreed to support the project. The data was collected in November and December 2011 by sending questionnaires to the determined school directors in an optical form. EARGED prepared mails for each school and every mail included 6 questionnaires. EARGED also added a formal document that explained the purpose and sample of this study into the mails. These mails were sent to school directors via district directors, and school directors were expected distributed the questionnaire forms to volunteer teachers who were from classroom, Mathematics, Science and Technology, Social Studies, Turkish, and English departments. After completing the forms, teachers returned them to the school coordinators and they mailed the questionnaires in closed envelops to district directors. Finally, after collecting all questionnaires from each school district directors sent all envelops to EARGED back. The collected data was read by computer and entered into an SPSS environment.

3.6 Data Analysis

First, data were screened to check for missing values and for incorrect data entry if any existed. Incorrect data entry was corrected by checking the questionnaires. Both in demographic variables and scale items, there were some missing values not exceeding 5 percent in a random pattern. Second, to provide construct validation evidence for In-Service Training Needs scale an Exploratory Factor Analysis was conducted using SPSS 18. Next, Cronbach's Alpha Coefficients were computed to check for internal consistency of In-Service Needs, Evaluation of In-Service Training Courses, and In-Service Training Preferences. Estimated scale reliabilities were screened to examine whether any problem with the items. Third, mean scores of each factor in In-Service Training Needs, and Evaluation of In-Service Training Courses were calculated. To figure out answers for the research questions, both descriptive and inferential statistics were employed. To predict what kind of in-service teacher training programs that teachers report that they need, the data was analyzed by utilizing the One-way Analysis of Variance (ANOVA) and Structural Equation Modeling (SEM). The assumptions were checked before the analyses. Normality of variables was checked through Kolmogorov-Smirnov and Shapiro-Wilk normality tests, histograms, p-p plots, and by inspecting skewness and kurtosis values. Normally distributed errors were screened by using histogram or normal P-P plots of the residuals. Homogenity of variances were checked through Levene's test. Furthermore, to figure out the mean differences between groups, post hoc comparison tests of Dunnet C and Bonferroni procedures were employed with respect to Levene's Test of Equity of Variances results.

Fourth, mean scores for the scales In-Service Training Needs and Evaluation of In-Service Training Courses were calculated to be used in Structural Equation Modeling. The main goal of the SEM is to present the interrelationships among variables (Kahn, 2006). Although SEM is similar to some common techniques like correlation, multiple regression, and analysis of variance, it differs from others in other respects. In SEM researchers first specify complex relationships, and then

test their model using the sample data. SEM also provides analysis of construct validity (Weston & Gore, 2006). In this sense, SEM is known as one of the second generation techniques, which has some advantages compared to first generation techniques like Multiple Regression with respect to how prior knowledge can be included in the analysis for confirmatory purposes, unobservable and abstract constructs can be modeled, and measurement errors can be taken into account in the model. The whole data analysis process is summarized in Figure 3.2.

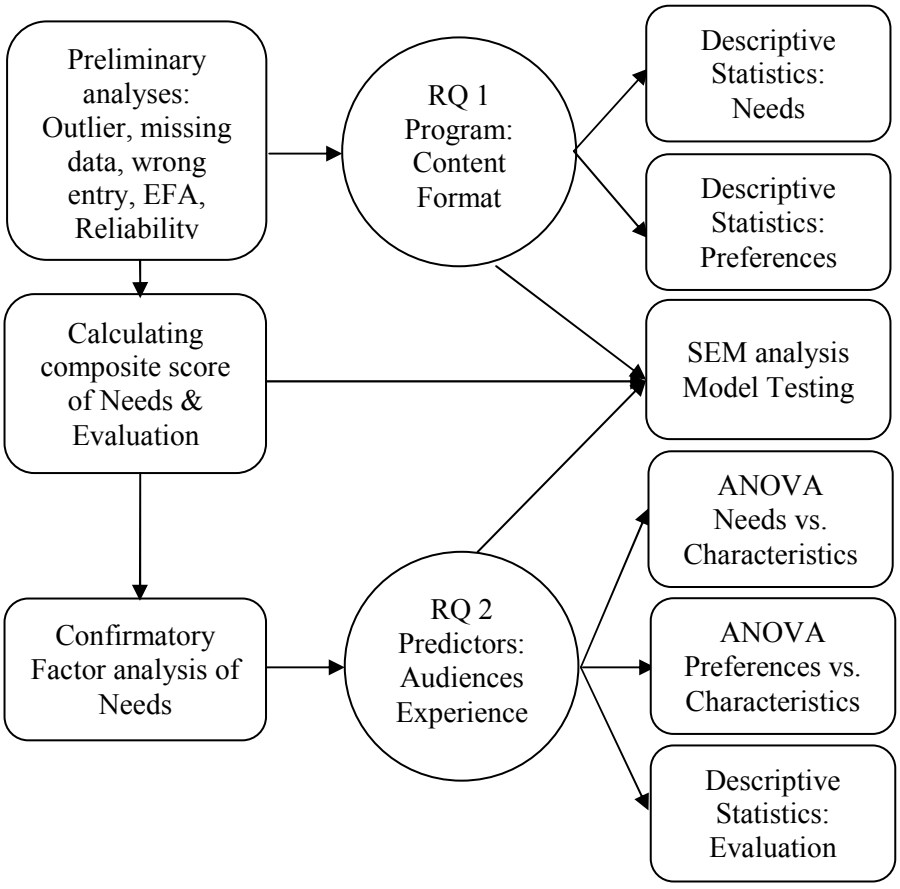

Figure 3.2. Data analysis procedures and presentation of results

Finally, to test the in-service teacher training needs model, SEM was conducted by using MPlus5.2. There are mainly two models used in the SEM analysis: structural and measurement. The structural model determines the relationship among the latent (unobserved) variables, and the measurement model specifies the relationship between the latent and manifest (observed) variables (Byrne, 2001).

The structural model in the study was specified using the theoretical framework derived from literature review which is presented in Figure 3.3.

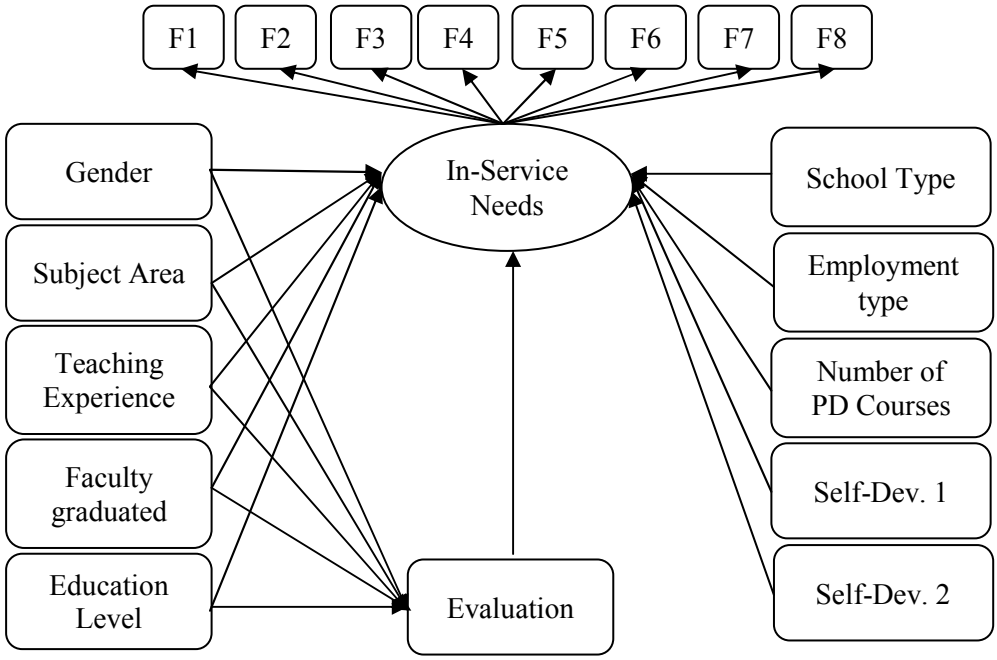

Figure 3.3. Hypothesized model displaying relationship between variables

Considering the existing framework in the literature, it was supposed that there were relationships between teachers' gender, subject area, teaching experience, faculty graduated, education level, school type, employment type, and their previous in-service training experiences. The *Endogenous (Dependent) variable* was in-service training needs of teachers. The *Exogenous (Independent) variables* of the study were gender (Female and Male), subject area (Classroom, Mathematics, Science and Technology, Turkish, English, and Social Studies), teaching experience (0-5; 6-10; 11-15; 16 or more years), faculty graduated (Faculty of Education and Others), education level (Pre-Undergraduate, Undergraduate, and Graduate), school type (Regular primary school, and others like YIBO, PIO), employment type (Tenured and others like contracted, substitute, assigned), self-development activities 1 (participating in various educative environments), self-development activities 2 of teachers (following print and visual education media), and previous in-service training experiences of teachers.

Prior to SEM analysis, to provide validation evidence for In-Service Training Needs, Confirmatory Factor Analysis (CFA) was conducted by Mplus (Muthén & Muthén) 5.2. To evaluate the model, multiple fit indices were available. In this study, researchers decided to calculate Chi-square, CFI, RMSEA, and SRMR to evaluate the model.

Chi-square Statistics: Absolute fit indices of non-significant χ^2 which show no statistically significant difference between the sample and the model covariance matrixes is a proof of a model that fit the data. However, it is very sensitive to sample size. Since large sample sizes increase power, the results are most probably approach to significance with small effect sizes (Henson, 2006). Therefore, researchers generally prefer to check some other fit indices to decide whether or not the model fit the data. In this sense, since the sample size was relatively large in this study, other fit indices like CFI, RMSEA, and SRMR were checked.

CFI (Comparative Fit Index): It is an example of incremental fit index, and its values range between 0 and 1. The values closer to 1 indicate better fit. It is generally accepted that the CFI values greater than .95 are considered a good fit of model of the data (Hu & Bentler, 1990).

RMSEA (Root Mean Square Error of Approximation): Since the value of RMSEA is not affected by sample size like chi-square, RMSEA is more commonly used alternative fit index among the studies with various sample sizes (Smith, McMillan, & Bradley, 2001). RMSEA value of below .06 is a proof of a model fit to the data (Hu & Bentler, 1998, 1999).

SRMR (Standardized Root Mean Square Residual): SRMR explains the value of difference exist between the observed data and the model (Bentler, 1995). Therefore smaller the SRMR value, better the model fit. The SRMR value which is smaller than .08 indicates good fit of the model to the data (Marsh, et al., 2004).

Furthermore, some of the terms used in SEM are; *Latent Variable* is a construct that is an unobserved hypothetical variable. Ovals or circles are generally used to symbolize latent variables (Weston & Gore, 2006). *Indicator* is also called a measured or manifest variable. It is an observable variable that is shown by rectangles or square shapes (Weston & Gore, 2006). *Factor Loading* is the path loading which is the correlation between a latent variable and an indicator. It is symbolized by a unidirectional arrow from indicator to latent variable (Weston & Gore, 2006).

SEM analysis employs maximum likelihood method which estimates the values of parameters that would provide the maximum probability of observed data to the theoretical model. The main purpose of SEM analysis is to make comparison between theoretical model and the model presented by the observed data. To decide whether the model generated from the empirical data fit the hypothetical model or not, fit indices were calculated. In this study, the model fit was checked by calculating chi-square statistic (Hoyle, 1995), root mean square error of approximation (RMSEA; Steiger & Lind, 1980) known as absolute fit indices, and the comparative fit index (CFI; Bentler, 1990) which was classified as incremental fit indices (Hair et al., 2006). For both type of fit indices, there are some criteria to evaluate the model fit. The significant value of Chi-square statistic results means that the specified model is different than observed data; hence, the hypothetical model does not fit the data. However, chi-square measure is sample size dependent. Therefore, for this study, owing to the large sample size, it is necessary to check for other fit indices to understand the actual model fit (Hair et al., 2006). A good fit is indicated by RMSEA values lower than .05; a medium fit is indicated by RMSEA values between .05 and .08; and a poor fit is indicated by values over .10 (Browne & Cudeck, 1993; MacCallum, Browne, & Sugawara, 1996). In addition to these criteria for absolute fit indices, CFI should change between 0 and 1 (Hair et al., 2006) to indicate a good fit between model and data (Smith, McMillan, & Bradley, 2001).

3.7 Limitations of the Study

1. The present study is limited to describing the relationship between genders, years in teaching, education levels, faculties graduated, school types, employment types, and in-service teacher needs. There may be other variables related to in-service training needs of teachers that were not taken into account.
2. The second-level variables like residential area and school size were not used in the study so that not to violate independence of observation assumption which increases Type I error.
3. This study relied on self-report data from teachers. Qualitative resources such as observation reports, interview reports, or peer evaluation were not used, because of the quantitative nature of the study.
4. Since the data were collected by the EARGED, which sent the questionnaires to the schools under a cover letter signed by the Ministry of Education, teachers completing the questionnaire might have felt the weight of this authority, which could have modified the frankness of their responses.
5. The participant cities and schools were randomly selected in the study. Each school received closed envelop including 6 questionnaires to be distributed to volunteer teachers. Which teachers participated to the study voluntarily is unknown. Their personal and academic characteristics may have significant effect on the research results.

CHAPTER IV

RESULTS

In this chapter, results of data analysis are presented under the following headings: In-service training programs with respect to teacher needs including content of in-service training programs and the form of in-service training programs; predictors of in-service training needs including audience of in-service training and the previous in-service training experiences of teachers; and structural equation modeling of in-service training needs.

4.1 In-service Training Programs with respect to Teacher Needs

Type of in-service training programs with respect to teacher needs was analyzed with two sub-questions under the main research question: *What sorts of in-service teacher training programs do teachers need?* Sub-questions which are

1. To what extend do teachers report that they need in-service training in the following domains: professional teaching knowledge, content area knowledge, technology use in education, preparation for national and internationals exams, psychological counseling and guidance, communication and social skills, development of social consciousness, self-development? and
2. What are teachers' expressed preferences about in-service training program characteristics including content, instructors, schedule and location, participants, and forms of evaluation of in-service training programs?

address content and form of in-service training programs that teachers report that they need. Descriptive statistics were used to answer these research questions. Data were presented in terms of means, percentages and standard deviations. The

range of the scale (which was 4) was divided by the number of scale points (which was 5), and the result (0.80) was used to determine the size of each unit of a transformed scale. Therefore, the 5-point scale was interpreted so that a response of 1-1.80 indicates "no need," 1.81-2.60 indicates "rare need," 2.61-3.40 indicates "occasional need," 3.41-4.20 indicates "regular need," and 4.21- 5.00 indicates "strong need."

4.1.1 Content of In-Service Training Programs

The content of in-service training programs that teachers demand regarding professional teaching knowledge, content area knowledge, technology use in education, preparation of national and internationals exams, guidance and special education, communication and social skills, self-development, and development of social consciousness categories are presented in Table 4.1.

Table 4.1

Needs with respect to General Content Categories (*N*=1730)

Categories	*M*	*SD*
Guidance and Special Education	3.13	.82
Preparation for National and Internationals Exams	2.96	.94
Self-Development	2.79	.84
Professional Teaching Knowledge	2.63	.75
Technology Use In Education	2.62	.92
Content Area Knowledge	2.58	.79
Development of Social Consciousness	2.29	.84
Communication and Social Skills	1.93	.82

In Table 4.1 teachers reported that the most highly rated topic need for in-service training was guidance and special education. Even so, the rating of need for this topic was only that this topic was needed "occasionally." According to transformed scale values teachers only rarely or occasionally need in-service training on professional teaching knowledge, technology use in education, preparation for national and international exams, and self-development. The least

needed training category was communication and social skills. To examine the teachers' ratings of content categories in more detail, responses for each content category were analyzed separately.

4.1.1.1 Guidance and Special Education

Under the Guidance and Special Education category, teachers rated 7 content labels to indicate their need on each. Teachers reported that they regularly needed in-service training on education of gifted students (*M*=3.41, *SD*=1.05). Moreover, teachers occasionally needed in-service training on the students with learning disabilities (*M*=3.26, *SD*=.98), the students who need psychological help (*M*=3.20, *SD*=.98), educational couching (*M*=3.13, *SD*=1.05), education of the children who work and are under the risks (*M*=3.08, *SD*=.99), prevention of crime and violence in educational institutions (*M*=2.99, *SD*=1.03), and individual differences in education (*M*=2.83, *SD*=1.00). The results are summarized in Table 4.2.

Table 4.2

Needs in Guidance and Special Education Category (*N*=1730)

Items	*M*	*SD*
Education of gifted students	3.41	1.05
Education of students with learning disabilities	3.26	.98
Education of students who need psychological help	3.20	.98
Educational coaching	3.13	1.05
Education children who work and are at risk	3.08	.99
Prevention of crime and violence in educational institutions	2.99	1.03
Individual differences in education	2.83	1.00

Guidance and special education is one of the most important components of teacher education. Developing some skills on this category is very crucial for teachers to detect and direct students who need help or special education to the right institutions. Under this category, in-service training programs on education of gifted students was highly emphasized by teachers, and teachers also reported occasional need for other categories. However, even though educational coaching is a new trend proposed by MoNE, teachers did not report much need on it.

4.1.1.2 Preparation for National and International Exams

Teachers rated 3 content labels under Preparation for National and International Exams category. Teachers reported regularly needing in-service training on introduction to PIRLS, TIMSS, and PISA (*M*=3.50, *SD*=1.21). Furthermore, teachers reported occasionally needing in-service training on preparing students for the OBBS exam (*M*=2.76, *SD*=1.11), and changing transition system from primary education to secondary education (*M*=2.62, *SD*=1.07) (Table 4.3).

Table 4.3

Needs in Preparation for National and International Exams (*N*=1730)

Items	*M*	*SD*
Introduction to PIRLS, TIMSS and PISA	3.50	1.21
Introduction to national exam ÖBBS	2.76	1.11
Introduction to changed transition system (SBS)	2.62	1.07

According to results, it could be possible to conclude that teachers wanted to participate to in-service training programs about international exams. However, they reported less need for transition system which changes regularly, and not stay the same for a long time.

4.1.1.3 Self-Development

Under the Self-Development category, teachers rated 6 content labels to indicate their need on each. The results are summarized in Table 4.4.

Table 4.4

Needs in Self-Development Category (*N*=1730)

Items	*M*	*SD*
Learning a foreign language	3.13	1.34
Project planning/management	2.97	1.11
Health and first aid knowledge	2.84	1.10
Speed reading techniques	2.78	1.15
Problem solving methods	2.70	1.03
Effective public speaking	2.30	1.09

According to the results, teachers occasionally needed in-service training to learn foreign languages (*M*=3.13, *SD*=1.34), on project planning/management (*M*=2.97, *SD*=1.11), health and first aid knowledge (*M*=2.84, *SD*=1.10), fast reading techniques (*M*=2.78, *SD*=1.15), and problem solving methods (*M*=2.70, *SD*=1.03). The results showed that teachers devote much need on in-service training programs about learning a foreign language. On the contrary, although the public speaking skills should have had a priority for teachers to develop, in this study they reported rare need for it.

4.1.1.4 Professional Teaching Knowledge

Under the Professional Teaching Knowledge category, teachers rated 10 training content labels to indicate their need on each. The results are summarized in Table 4.5.Teachers reported only occasional need for new approaches in education (*M*=2.94, *SD*=1.02), changing paradigms and educational systems (*M*=3.07, *SD*=1.04), planning a social activity (*M*=2.77, *SD*=1.02), and providing guidance to prospective teachers (*M*=2.61, *SD*=1.15).

Table 4.5

Needs in Professional Teaching Knowledge Category (*N*=1730)

Items	*M*	*SD*
Changing paradigms and educational systems	3.07	1.04
New approaches in education	2.94	1.02
Planning a social activity	2.77	1.02
Guidance for prospective teachers	2.61	1.15
Teaching methods and principles	2.58	.97
Assessment and measurement techniques	2.57	1.03
Learning and development	2.56	1.04
Instructional planning	2.55	.99
Basic methods of classroom management	2.50	1.05
Ethics in teaching	2.09	.99

Teachers' professional teaching knowledge is an important aspect of being a good teacher by carrying multiple dimensions. Table 4.2 shows there is a mean wise manner. Even though, there are ten training content labels, mean scores indicates

two main need scale; rare and occasional. Based on the data teaching methods and principles, assessment and measurement techniques, learning and development, instructional planning, basic methods of classroom management, and ethics in teaching are rare needs for 1730 teachers. If the items are examined closely, it could be possible to conclude that teachers reported more needs on the items (changing paradigms and educational systems, new approaches in education, planning a social activity, and guidance for prospective academicians) that are not taught in education faculties as a course.

4.1.1.5 Technology Use in Education

Under the category Technology Use in Education, teachers rated 8 content labels to indicate their need on each. The results are summarized in Table 4.6. According to results, teachers reported that they regularly needed in-service training on smart board usage (*M*=3.57, *SD*=1.18). Moreover, teachers occasionally needed in-service training on preparing effective teaching materials with Flash and similar software (*M*=2.94, *SD*=1.19), and on preparing effective teaching material with MS Office software (*M*=2.76, *SD*=1.20). Smart boards will be using widespread in a few years. It is possible to understand why teachers reported more need on this item. At this time, to conclude better about why teachers did not report a need for other items, knowing more about teachers' competency levels is important.

Table 4.6

Needs in Technology Use in Education Category (*N*=1730)

Items	*M*	*SD*
Smart board usage	3.57	1.18
Preparing effective teaching material with Flash and similar software	2.94	1.19
Preparing effective teaching material with MS Office software	2.76	1.20
MS Office programs usage (Word, Excel, PowerPoint, etc.)	2.53	1.19
Projector use	2.44	1.16
Preparing instructional content with the help of Internet	2.41	1.18
Basic computer skills	2.22	1.12
Internet usage (Search, download, email, etc.)	2.03	1.09

4.1.1.6 Content Area Knowledge

Under the category of *Content Area Knowledge*, teachers rated 8 content labels to indicate their need on each. They reported that teachers only occasionally needed in-service training on learning new topics in their subject area (*M*=2.62, *SD*=1.04), developing learning material/activity on their subject area (*M*=2.84, *SD*=1.02), use of learning materials in their subject area (*M*=2.66, *SD*=1.02), and curriculum changes/reforms (*M*=2.87, *SD*=1.00). For the other content labels, teachers reported rarely need. The results are summarized in Table 4.7.

Table 4.7

Needs in Content Area Knowledge Category (*N*=1730)

Items	*M*	*SD*
Curriculum changes/reforms	2.87	1.00
Developing learning material/activity in my subject area	2.84	1.02
Usage of learning materials on my subject area	2.66	1.02
Learning new topics in my subject area	2.62	1.04
Examining/selecting educational sources and tools in my subject area	2.59	1.02
Helping students to develop positive attitudes in my subject area	2.56	1.05
Relating my subject area to daily life	2.35	.99
Revising topics in my subject area	2.13	.95

Although teachers reported more need on changing paradigms and educational systems in previous sections, they did not report that much need on curriculum changes and reforms under content area knowledge category.

4.1.1.7 Development of Social Consciousness

Under the category Development of Social Consciousness, teachers rated 6 content labels to indicate how much they need to get training. Teachers reported that they rarely needed to the content labels of basic disaster preparedness (*M*=2.57, *SD*=1.08), media literacy (*M*=2.48, *SD*=1.05), protection of the environment and sustainable development (*M*=2.26, *SD*=.99), consumer consciousness and rights (*M*=2.17, *SD*=.98), democratic citizenship and human rights (*M*=2.12, *SD*=.93),

and preserving cultural and environmental values (*M*=2.10, *SD*=.93) under this category. The results are summarized in Table 4.8.

Table 4.8

Needs in Development of Social Consciousness Category (*N*=1730)

Items	*M*	*SD*
Basic disaster preparedness	2.57	1.08
Media literacy	2.48	1.05
Protection of the environment and sustainable development	2.26	.99
Consumer consciousness and rights	2.17	.98
Democratic citizenship and human rights	2.12	.93
Preserving cultural and environmental values	2.10	.93

It is widely known that one of the bases of a good society is advanced individual consciousness. Therefore, it is difficult to explain teachers' reports of low needs about social consciousness.

4.1.1.8 Communication and Social Skills

Under the category Communication and Social Skills, teachers rated 4 content labels to indicate their in-service training need on each. Teachers reported that they rarely needed in-service training on communication with students (*M*=1.98, *SD*=.93), and parents (*M*=1.97, *SD*=.92), adapting to new workplace (*M*=1.92, *SD*=.95), and communication with colleagues (*M*=1.85, *SD*=.91) (Table 4.9).

Table 4.9

Needs in Communication and Social Skills Category (*N*=1730)

Items	*M*	*SD*
Communication with students	1.98	.93
Communication with parents	1.97	.92
Adapting to new workplace (city, district, etc)	1.92	.95
Communication with colleagues	1.85	.91

4.1.2 Preferred Form of In-Service Training Programs

To document teachers' preferences about the form of in-service training teachers indicated their preferences under the five sub categories. Namely, content delivery format, instructors, training schedule and location, participants, and evaluation format of in-service training programs. The range of the scale (which was 4) was divided by the number of scale points (which was 5), and the result (0.80) was used to determine the size of each unit of a transformed scale. Therefore, the 5-point scale was interpreted so that a response of 1-1.80 indicates "never prefer," 1.81-2.60 indicates "rarely prefer," 2.61-3.40 indicates "neither prefer nor not prefer," 3.41-4.20 indicates "prefer," and 4.21- 5.00 indicates "strongly prefer."

According to results, teachers strongly preferred that instructor be academicians (*M*=4.33, *SD*=.94), and participants be involved in-service training programs voluntarily (*M*=4.37, *SD*=.84). Furthermore, teachers preferred that content that is delivered via lecturing by instructors also be supported by activities (*M*=4.07, *SD*=.91). Teachers preferred that required materials and sources be announced before a course starts (*M*=4.01, *SD*=.90), that content be determined after a needs analysis (*M*=4.00, *SD*=1.09), that content be discussed by participants before being lectured on by instructors (*M*=3.79, *SD*=1.04), that courses be scheduled during the September seminar term (*M*=3.80, *SD*=1.35) or during the June seminar term (*M*=3.64, *SD*=1.52). Teachers preferred that all participants be teachers (*M*=3.97, *SD*=1.01), that all participants be from the same subject area (*M*=3.91, *SD*=1.04), and that participants be from different school and districts (*M*=3.66, *SD*=1.11). Concerning the form of in-service program evaluation, teachers preferred that evaluation be done by online questionnaire (*M*=3.62, *SD*=1.14), using multiple methods (*M*=3.59, *SD*=1.12), and that the results of evaluation be reflected in improvements of future in-service trainings (*M*=3.50, *SD*=1.13).On the critical side, teachers did not prefer that courses given during the regular semester, nor after school hours (*M*=1.98, *SD*=1.28), and if they must be offered during the regular semester time, in-service programs should not be offered on the weekends (*M*=1.90, *SD*=1.26). In addition, they never preferred courses offered in the same

city as their school (*M*=1.79, *SD*=1.03), or offered during semester breaks (February) (*M*=1.75, *SD*=1.19), nor programs offered during summer time (July and August) (*M*=1.69, *SD*=1.18). In short, it is possible to conclude that teachers did not want to participate to in-service training programs neither within the semester nor in their holiday times. Teacher preferences are presented in Table 4.10.

Table 4.10

In-Service Training Preferences Reported by Teachers (*N*=1730)

Categories	*M*	*SD*
Delivery of Content		
Content is lectured by instructors and supported by activities	4.07	.91
Required materials and sources are announced earlier	4.01	.90
Content is determined after analysis of teacher needs	4.00	1.09
Content is discussed by participants before being lectured on by instructors	3.79	1.04
Content is taught by questioning	3.19	1.13
Instructors		
Academicians	4.33	.94
From Ministry of National Education	2.91	1.29
School directors	2.65	1.25
Inspectors	2.65	1.29
Schedule and Place		
Courses given before school starts (September seminar term)	3.80	1.35
Courses given before school finishes (June seminar term)	3.64	1.52
Courses that are given as distance education	2.88	1.35
Courses that are given within semester time, after school hours	1.98	1.28
Courses that are given within semester time, on weekends	1.90	1.26
Courses that are given in the same city as my school	1.79	1.03
Courses that are given during semester breaks (February)	1.75	1.19
Courses that are given during summer time (July and August)	1.69	1.18
Participants		
Participants who all participate voluntarily	4.37	.84
Participants who are all teachers	3.97	1.01
Participants who are all from the same subject area	3.91	1.04
Participants who are from different school and districts	3.66	1.11
Evaluation		
Evaluation is done by online questionnaire	3.62	1.14
Evaluation is done by multiple methods	3.59	1.12
Evaluation is done as follow-up tests in the future	3.50	1.13
The participation is an important part in evaluation	3.36	1.20
Evaluation results that are important for recruitment, preferment.	3.11	1.41

Finally, the items with mean values between 2.61 and 3.40 indicate that teachers had no strong preference in either direction. To be able to interpret the results for those items, further information gathered by qualitative research techniques is needed. That is, teachers had hesitation on the preferences of content is taught by questioning, instructors who come from MoNE, school directors or inspectors, courses given as a distance education format, participation is an important part in evaluation, and evaluation results that are important for recruitment, preferment, etc.

4.2 Predictors of In-service Training Needs

Audiences of in-service training needs were investigated in three sub-questions under the main research question: *What are the predictors of teachers' reports of their in-service training needs in different domains of teachers' professional development?* Research questions address individual effect of each categorical variable (gender, subject area, teaching experience, faculty graduated, education level, school type, employment type, and previous in-service training experiences. To determine which categories of teachers reported that they needed particular training program content, One-way ANOVA analysis was employed. Correspondingly, to determine the mean difference between teachers' individual characteristics and their training preferences, One-way ANOVA analysis was conducted. Finally, to draw the general picture of predictors of in-service training needs of teachers, a hypothetical model was tested with SEM.

4.2.1 Effect of Individual Characteristics on Needs

To find the answer the research question "Are there significant mean differences in teachers' reports of their in-service needs related to factors such as gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type?," one-way ANOVA analyses were conducted.

4.2.1.1 Effect of Gender

The hypothesis that there is not a significant difference in teachers' reported needs with respect to their gender was tested. The hypothesis was rejected for needs of *Technology Use in Education* (Females: M=2.67, SD=.88; males: M=2.55, SD=.96; $F(1, 1650)=6.88$, $p<.05$, $\eta^2=.004$), *Preparation for National and International Exams* (Females: M=3.00, SD=.92; males: M=2.90, SD=.97; $F(1, 1634)= 4.79$, $p<.05$, $\eta^2=.003$), and *Guidance and Special Education* (Females: M=3.17, SS=.81; males: M=3.08, SS=.82; $F(1, 1646)= 1.30$, $p<.05$, $\eta^2=.003$) since the mean differences between males and females were found to be statistically significant. The results are summarized in Table 4.11.

Table 4.11

Effect of Gender on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	η^2
Professional teaching knowledge	Between Groups	.45	1	.45	.81	
	Within Groups	920.58	1650	.56		
Technology use in education	Between Groups	5.79	1	5.79	6.88*	.00
	Within Groups	1388.61	1649	.84		
Preparation for national and international exams	Between Groups	4.23	1	4.23	4.79*	.00
	Within Groups	1444.05	1633	.88		
Guidance and special education	Between Groups	3.70	1	3.70	5.55*	.00
	Within Groups	1098.11	1645	.67		
Communication and social skills	Between Groups	.37	1	.37	.57	
	Within Groups	1079.19	1644	.66		
Self-development	Between Groups	1.39	1	1.39	1.99	
	Within Groups	1154.24	1649	.70		
Development of social consciousness	Between Groups	.92	1	.92	1.30	
	Within Groups	1161.94	1645	.71		

* $p<.05$

For all three categories female teachers reported more need than male teachers did. Gender has very small effect on the reported need for in-service training in these categories since it accounts for little more than 0 percent of the variance. That is, the differences between females and males on this variable were statistically significant but not practically significant. It can be possible to conclude that gender did not have an effect on the needs of teachers. On the other side, there were no significant mean differences between male and female teachers' ratings of their in-service needs for *Professional Teaching Knowledge* (Females: M=2.62, SD=.70; males: M=2.65, SD=.80; F(1, 1651)=.81, p=.37), and for *Self-Development* (Females: M=2.77, SD=.80;males: M=2.83, SD=.88; F(1, 1650)=1.99, p=.16).

4.2.1.2 Effect of Subject Area

To test the hypothesis that there is not a significant difference in teachers' reported needs with respect to their subject area, a one-way ANOVA was conducted. The hypothesis was rejected for needs of *Technology Use in Education* (Classroom teacher: M=2.66, SD=.97; Mathematics: M=2.55, SD=.91; Science and Technology: M=2.66, SD=.92; Turkish: M=2.69, SD=.87; English: M=2.46, SD=.86; Social Sciences: M=2.65, SD=.90; F(5, 1684)= 2.33, p<.05)*, Preparation for National and International Exams* (Classroom teacher: M=2.92, SD=1.07; Mathematics: M=2.84, SD=.86; Science and Technology: M= 2.94, SD=.87; Turkish: M=3.03, SD=.93; English: M=3.10, SD=.86; Social Sciences: M=2.95, SD=.86; F(5, 1668)=2.33, p<.05), and *Self-Development* (Classroom teacher: M=2.83, SD=.86; Mathematics: M=2.91, SD=.80; Science and Technology: M=2.80, SD=.83; Turkish: M=2.74, SD=.82; English: M=2.53, SD=.84; Social Sciences: M=2.90, SD=.82; F(5, 1684)=2.77, p<.05)categories since the mean differences between Classroom, Mathematics, Science and Technology, Turkish, English and Social Sciences teachers were found statistically significant. Subject area has small effects on the need of these categories since it accounts for 1%, 1%, 2%, and 1% of the variances respectively. As a post hoc comparison, Bonferroni procedure was conducted since Levene's Test of Homogeneity of Variances was significant suggesting unequal variances among the groups. According to the

follow-up test results, English teachers reported that they have a need for in-service training on *Preparation of National and International Exams* when compared with Mathematics teachers; Classroom, Mathematics, Science and Technology, and Social Sciences teachers reported need for training in the category of *Self-Development* when compared with English teachers. Furthermore, there were not significant mean differences with respect to teachers' subject area on the needs of professional teaching knowledge, subject area knowledge, guidance and special education, communication and social skills (Table 4.12).

Table 4.12

Effect of Subject Area on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	η^2
Professional teaching knowledge	Between Groups	.18	5	.04	.06	
	Within Groups	943.23	1680	.56		
Subject area knowledge	Between Groups	2.77	5	.56	.90	
	Within Groups	1033.79	1676	.62		
Technology use in education	Between Groups	9.74	5	1.95	2.33*	.01
	Within Groups	1403.10	1679	.84		
Preparation for national and international exams	Between Groups	10.17	5	2.03	2.33*	.01
	Within Groups	1449.45	1663	.87		
Guidance and special education	Between Groups	3.43	5	.69	1.03	
	Within Groups	1118.97	1675	.67		
Communication and social skills	Between Groups	5.92	5	1.18	1.78	
	Within Groups	1112.12	1674	.66		
Self-development	Between Groups	24.93	5	4.99	7.22*	.02
	Within Groups	1160.05	1679	.69		
Development of social consciousness	Between Groups	9.79	5	1.96	2.76*	.01
	Within Groups	1187.03	1675	.71		

* $p<.05$

4.2.1.3 Effect of Teaching Experience

To test the hypothesis that there is no significant difference in reports of teachers' needs for in-service training with respect to their teaching experience, a one-way ANOVA was conducted. Test results are presented in Table 4.13.

Table 4.13

Effect of Teaching Experience on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	η^2
Professional teaching knowledge	Between Groups	1.56	3	.52	.92	
	Within Groups	949.37	1684	.56		
Subject area knowledge	Between Groups	.25	3	.08	.132	
	Within Groups	1047.95	1680	.62		
Technology use in education	Between Groups	39.17	3	13.06	15.98*	.03
	Within Groups	1374.99	1682	.82		
Preparation for national and international exams	Between Groups	14.67	3	4.89	5.60*	.01
	Within Groups	1455.11	1665	.87		
Guidance and special education	Between Groups	9.39	3	3.13	4.72*	.01
	Within Groups	1112.78	1679	.66		
Communication and social skills	Between Groups	2.88	3	.96	1.45	
	Within Groups	1114.56	1678	.66		
Self-development	Between Groups	6.10	3	2.03	2.92*	.01
	Within Groups	1173.11	1683	.70		
Development of social consciousness	Between Groups	4.74	3	1.58	2.23	
	Within Groups	1189.13	1679	.71		

* $p<.05$

The hypothesis was rejected for needs of *Technology Use in Education* (0-5 years: *M*=2.53, *SD*=.89; 6-10 years: *M*= 2.56, *SD*=.88; 11-15 years: *M*=2.61, *SD*=.92; 16

or more years: *M*=2.97, *SD*=.97; *F*(3, 1685)=15.97, *p*<.05)*, Preparation of National and International Exams* (0-5 years: *M*=3.04, *SD*=.88; 6-10 years: *M*=2.99, *SD*=.97; 11-15 years: *M*=2.87, *SD*=.98; 16 or more years: *M*=2.78, *SD*=.97; *F*(3, 1668)=5.60, *p*<.05), *Guidance and Special Education* (0-5 years: *M*=3.14, *SD*=.76; 6-10 years: *M*=3.22, *SD*=.81; 11-15 years: *M*=3.10, *SD*=.91; 16 or more years: *M*=2.98, *SD*=.87; *F*(3, 1682)=4.72, *p*<.05), and *Self-Development*(0-5 years: *M*=2.78, *SD*=.81; 6-10 years: *M*=2.87, *SD*=.84; 11-15 years: *M*=2.80, *SD*=.87; 16 or more years: *M*=2.68, *SD*=.88; *F*(3, 1686)=2.91, *p*<.05) categories since the mean differences between teachers who have teaching experience of 0-5 years, 6-10 years, 11-15 years, and 16 or more years were found statistically significant. Teaching experience small effects on the need of these categories since it accounts for 3%, 1%, 1%, and 1% of the variances respectively. Moreover, there were not significant mean differences between teachers' in-service needs of *Professional Teaching Knowledge* (0-5 years: *M*=2.65, *SD*=.73; 6-10 years: *M*=2.64, *SD*=.77; 11-15 years: *M*=2.65, *SD*=.76; 16 or more years: *M*=2.56, *SD*=.76; *F*(3, 1687)=.92, *p*=.43) with respect to their teaching experience.

Post hoc comparison was performed subsequent to significant ANOVA result to investigate the pair-wise differences among the possible groups. Since Levene's Test of Equality of Error Variance was found significant, to compare the groups, a Dunnet C post hoc test was decided to employ. According to the test results, teachers with 16 or more years teaching experience reported a higher need for *Technology Use in Education* than did the other less experienced groups. Teachers with 0-5 years teaching experience and 6-10 years teaching experience reported more need on *Preparation for National and International Exams* and on *Guidance and Special Education* compared with more experienced teachers who have 16 or more years of teaching experience. Similarly, teachers with 6-10 years teaching experience reported more need for *Self-Development* compared with teachers who have 16 or more years teaching experience. It could be possible to conclude that there is a difference on the in-service training needs on technology use in education, preparation for inter/national exams, guidance and special education, and self-development among more experienced and less experienced teachers.

4.2.1.4 Effect of Faculty Graduated

To test the hypothesis; there is not a significant difference in teachers' reported needs with respect to their faculty graduated, a one-way ANOVA was conducted. The results are shown in Table 4.14.

Table 4.14

Effect of Faculty Graduated on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	η^2
Professional teaching knowledge	Between Groups	.08	1	.08	.13	
	Within Groups	959.46	1708	.56		
Subject area knowledge	Between Groups	.47	1	.47	.75	
	Within Groups	1055.64	1704	.62		
Technology use in education	Between Groups	1.35	1	1.35	1.61	
	Within Groups	1432.20	1707	.84		
Preparation for national and international exams	Between Groups	.27	1	.27	.31	
	Within Groups	1487.73	1691	.88		
Guidance and special education	Between Groups	1.43	1	1.43	2.14	
	Within Groups	1138.88	1704	.67		
Communication and social skills	Between Groups	.04	1	.04	.06	
	Within Groups	1130.46	1703	.66		
Self-development	Between Groups	6.27	1	6.27	8.99*	.01
	Within Groups	1191.58	1709	.70		
Development of social consciousness	Between Groups	.08	1	.08	.11	
	Within Groups	1211.22	1704	.71		

* $p<.05$

The hypothesis was rejected for need of *Self-Development* (Faculty of Education: $M=2.82$, $SD=.83$; others: $M=2.66$, $SD=.87$; $F(1, 1710)= 8.99$, $p<.05$). Faculty type

has a small effect on the need of self-development since it accounts for 1% of the variance. The results indicate that teachers who are graduated from faculty of education reported need for *Self-Development* when compared with the teachers who are graduated from other faculties

On the other hand, there were not significant mean differences between teachers' in-service needs of *Professional Teaching Knowledge* (Faculty of Education: M=2.64, SD=.74; others: M=2.62, SD=.78; $F(1, 1709)$=.13, p=.72), *Technology Use in Education* (Faculty of Education: M=2.60, SD=.91; others: M=2.67, SD=.94; $F(1, 1708)$=1.61, p=.21), *Preparation of National and International Exams* (Faculty of Education: M=2.97, SD=.93; others: M=2.93, SD=.96; $F(1, 1692)$=.31, p=.58), and *Guidance and Special Education* (Faculty of Education: M=3.14, SD=.80; others: M=3.07, SD=.89; $F(1, 1705)$=2.14, p=.14) with respect to their faculty graduated type. The results of ANOVA test implied that faculty type did not have an effect on most of the needs of teachers. It is possible to say that teachers' needs did not show difference among teachers graduated from faculty of education and the teachers graduated from other type of faculties. It may be concluded that teachers graduated from other faculties developed their skills and knowledge via themselves or pedagogical formation courses.

4.2.1.5 Effect of Education Level

To test the hypothesis that there is not a significant difference in teachers' reported needs with respect to their education level, a one-way ANOVA was conducted. The hypothesis was rejected for needs of *Technology Use in Education* (Pre-undergraduate: M=2.94, SD=1.07; undergraduate: M=2.60, SD=.91; graduate: M=2.47, SD=.87; $F(2, 1682)$= 7.51, p<.05), *Guidance and Special Education* (Pre-undergraduate: M=3.03, SD=.93; undergraduate: M=3.13, SD=.81; graduate: M=3.35, SD=.78; $F(2, 1678)$=3.51, p<.05, η^2=.004) categories since the mean differences between teachers who have education level of pre-undergraduate, undergraduate, and graduate were found statistically significant. Education level has small effects on the need of these categories since it accounts for 1%, and

nearly 0 percent of the variances respectively which means the differences with respect to education level on the need of Guidance and Special Education were statistically significant but not practically significant. Gelman and Stern (2006) state that "statistical significance is not the same as practical importance" (p. 328). Therefore, it is possible to say that education level of teachers does not make a difference on the needs of teachers (Table 4.15).

Table 4.15

Effect of Education Level on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	η^2
Professional teaching knowledge	Between Groups	.19	2	.09	.17	
	Within Groups	944.06	1681	.562		
Subject area knowledge	Between Groups	.11	2	.05	.09	
	Within Groups	1036.41	1677	.62		
Technology use in education	Between Groups	12.57	2	6.28	7.51*	.01
	Within Groups	1405.89	1680	.84		
Preparation for national and international exams	Between Groups	5.09	2	2.54	2.90	
	Within Groups	1459.24	1665	.88		
Guidance and special education	Between Groups	4.66	2	2.33	3.51*	.00
	Within Groups	1111.74	1676	.66		
Communication and social skills	Between Groups	.85	2	.42	.64	
	Within Groups	1104.79	1675	.66		
Self-development	Between Groups	2.40	2	1.20	1.72	
	Within Groups	1171.13	1680	.70		
Development of social consciousness	Between Groups	1.30	2	.65	.91	
	Within Groups	1195.70	1676	.71		

* $p<.05$

Nevertheless, there were not significant mean differences between teachers' in-service needs of *Professional Teaching Knowledge* (Pre-undergraduate: *M*=2.62, *SD*=.70; undergraduate: *M*=2.63, *SD*=.75; graduate: *M*=2.68, *SD*=.83; *F*(2, 1683)=.17, *p*=.85), *Preparation of National and International Exams* (Pre-undergraduate: *M*=2.77, *SD*=1.06; undergraduate: *M*=2.97, *SD*=.93; graduate: *M*=3.11, *SD*=.89; *F*(2, 1667)=2.90, *p*=.06), and *Self-Development*(Pre-undergraduate: *M*=2.67, *SD*=.88; undergraduate: *M*=2.80, *SD*=.84; graduate: *M*=2.90, *SD*=.78; *F*(2, 1682)=1.72, *p*=.18) with respect to their education level.

Depending on the significant results of Levene's Test of Variances, Dunnet C post hoc test was preferred, and results show that teachers with pre-undergraduate education needed *Technology Use in Education* compared with teachers with undergraduate and graduate education. Teachers with graduate education reported need for *Guidance and Special Education* when compared with other groups.

4.2.1.6 Effect of School Type

To test the hypothesis that there is not a significant difference in teachers' reported needs with respect to their school type, a one-way ANOVA was conducted. Test results showed that there were not any significant mean differences between teachers' in-service needs with respect to their school type. Therefore, it can be concluded that even though the characteristics of regular primary schools and others like YIBO, PIO are different from each other, teachers' needs do not show differences with respect to their school type. The results are presented in Table 4.16.

Table 4.16

Effect of School Type on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	*p*
Professional teaching knowledge	Between Groups	.13	1	.13	.22	.64
	Within Groups	959.41	1708	.56		

*$p<.05$

Table 4.16 (continued)

Categories	Sources	*SS*	*df*	*MS*	*F*	*p*
Subject area knowledge	Between Groups	.85	1	.85	1.37	.24
	Within Groups	1055.26	1704	.62		
Technology use in education	Between Groups	.02	1	.02	.02	.90
	Within Groups	1433.53	1707	.84		
Preparation for national and international exams	Between Groups	.13	1	.13	.15	.70
	Within Groups	1487.87	1691	.88		
Guidance and special education	Between Groups	.02	1	.02	.03	.86
	Within Groups	1140.29	1704	.67		
Communication and social skills	Between Groups	.23	1	.23	.34	.56
	Within Groups	1130.27	1703	.66		
Self-development	Between Groups	.97	1	.97	1.39	.24
	Within Groups	1196.87	1709	.70		
Development of social consciousness	Between Groups	.13	1	.13	.19	.66
	Within Groups	1211.17	1704	.71		

* $p<.05$

4.2.1.7 Effect of Employment Type

The hypothesis that there is not a significant difference in teachers' needs regarding employment type was tested. The hypothesis was rejected for needs of *Technology Use in Education* (Tenured: M=2.60, SD=.91; others: M=2.74, SD=.96; $F(1, 1708)=3.98$, $p<.05$, $\eta^2=.002$), and *Preparation of National and International Exams* (Tenured: M=2.94, SD=.94; others: M=3.14, SD=.90; $F(1, 1692)=7.46$, $p<.05$, $\eta^2=.004$) categories since the mean differences between teachers who work in a tenured position and teachers who work in other positions were found statistically significant. Teachers who work with other position types reported more need on *Technology Use in Education* and *Preparation of National and International Exams.* Employment type has very small effects on the need of

these categories since it accounts for nearly 0 percent of the variances. That is, the differences between groups on this variable were statistically significant but not practically significant. The results are presented in Table 4.17.

Table 4.17

Effect of Employment Type on Teachers' Reported Needs

Categories	Sources	*SS*	*df*	*MS*	*F*	η^2
Professional teaching knowledge	Between Groups	1.51	1	1.51	2.70	
	Within Groups	958.03	1708	.56		
Subject area knowledge	Between Groups	.00	1	.00	.00	
	Within Groups	1056.11	1704	.62		
Technology use in education	Between Groups	3.33	1	3.33	3.98*	.00
	Within Groups	1430.21	1707	.84		
Preparation for national and international exams	Between Groups	6.54	1	6.54	7.46*	.00
	Within Groups	1481.46	1691	.88		
Guidance and special education	Between Groups	.29	1	.29	.43	
	Within Groups	1140.02	1704	.67		
Communication and social skills	Between Groups	4.98	1	4.98	7.54*	.00
	Within Groups	1125.52	1703	.66		
Self-development	Between Groups	.03	1	.03	.04	
	Within Groups	1197.82	1709	.70		
Development of social consciousness	Between Groups	.64	1	.64	.89	
	Within Groups	1210.67	1704	.71		

* $p<.05$

Moreover, there were not any significant mean differences between teachers' in-service needs of *Professional Teaching Knowledge* (Tenured: M=2.62, SD=.74; others: M=2.72, SD=.80; $F(1, 1709)$=2.70, p=.10), *Guidance and Special Education* (Tenured: M=3.13, SD=.81; others: M=3.17, SD=.87; $F(1, 1705)$=.43,

p=.51), and *Self-Development*(Tenured: *M*=2.79, *SD*=.84; others: *M*=2.80, *SD*=.84; *F*(1, 1710)=.04, *p*=.84) with respect to their employment type that they work. It could be possible to conclude that employment type of teachers does not create a difference on in-service training needs of teachers. That is, teachers who has a tenured job position, and teachers who are substitutes or has a temporarily job position have the same needs.

4.2.2 The Effect of Individual Characteristics on In-service Preferences

To find the answer of the following research question "Are there significant mean differences in teachers' reports of their in-service training program preferences related to factors such as gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type?", one-way ANOVA analyses were conducted.

4.2.2.1 Effect of Gender

To test the hypothesis that there is not a significant difference in teachers' reported preferences to their gender, One-way ANOVA was conducted. The hypothesis was rejected for preferences of *content be determined after analysis of teacher needs* (Females: *M*=4.08, *SD*=1.01; males: *M*=3.90, *SD*=1.13; *F*(1, 1622)=11.76, *p*<.05)*, required materials and sources be announced before course starts* (Females: *M*=4.15, *SD*=.78; males: *M*=3.84, *SD*=.98; *F*(1, 1621)=49.38, *p*<.05), *content be lectured by instructors and supported by activities* (Females: *M*=4.18, *SD*=.84; males: *M*=3.95, *SD*=.96; *F*(1, 1625)=26.56, *p*<.05), *instructors be academicians* (Females: *M*=4.37, *SD*=.89; males: *M*=3.27, *SD*=1.00; *F*(1, 1622)=4.47, *p*<.05), *courses that be given in June seminar term* (Females: *M*=3.74, *SD*=1.48; males: *M*=3.55, *SD*=1.55; *F*(1, 1625)=6.24, *p*<.05), *participants who are all participate with voluntarily* (Females: *M*=4.42, *SD*=.75; males: *M*=4.32, *SD*=.93; *F*(1, 1619)=6.47, *p*<.05), and *evaluation be done as follow-up tests in the future* (Females: *M*=3.43, *SD*=1.14; males: *M*=3.58, *SD*=1.13; *F*(1, 1620)=4.49, *p*<.05) categories since the mean differences between males and females were found

statistically significant. According to the results, female teachers reported preference for *content is determined after analysis of teacher needs, required materials and sources are announced before course starts, content is lectured by instructors than supported by activities, instructors are academicians, courses that are given in June seminar term,* and *participants who are all participate with voluntarily* when compared to males. On the contrary, male teachers reported preference for *evaluation is done as follow-up tests in the future* when compared to female teachers. Gender has small, small to medium, effects on the preferences since it accounts for 1%, 3%, and 2% of the variances respectively. However, it has very small effect for other preferences since it accounts for nearly 0% of the variances which means the differences between females and males on those variables were statistically significant but not practically significant. This means that gender had an impact on the preferences of content be determined after analysis of teacher needs, required materials and sources be announced before course starts, and content be lectured by instructors and supported by activities. Although test results were significant, gender did not effect on teachers' preferences of instructors be academicians, courses given June seminar term, participants who are participate with voluntarily, and evaluation be done as follow-up tests. On the other hand, there were not significant mean differences between teachers' other preferences with respect to their gender (Table 4.18).

Table 4.18

Effect of Gender on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	13.60	1	13.60	11.76*	.01
	Within Groups	1874.40	1621	1.16		
Required materials and sources are announced before course starts	Between Groups	38.06	1	38.06	49.38*	.03
	Within Groups	1248.76	1620	.77		
Content is lectured by instructors then supported by activities	Between Groups	21.45	1	21.45	26.56*	.02
	Within Groups	1311.63	1624	.81		

*p<.05

Table 4.18 (continued)

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is discussed by participants before being lectured on by instructors	Between Groups	.70	1	.70	.64	
	Within Groups	1755.41	1618	1.09		
Instructors are academicians	Between Groups	3.97	1	3.97	4.47*	.00
	Within Groups	1437.91	1621	.89		
Courses that are given in June seminar term	Between Groups	14.27	1	14.27	6.24*	.00
	Within Groups	3709.80	1624	2.28		
Courses that are given in September seminar term	Between Groups	4.66	1	4.66	2.53	
	Within Groups	2974.48	1618	1.84		
Participants who are all teachers	Between Groups	.06	1	.06	.06	
	Within Groups	1642.75	1621	1.01		
Participants who are all from the same subject area	Between Groups	3.22	1	3.22	2.98	
	Within Groups	1750.50	1624	1.08		
Participants who are all participate with voluntarily	Between Groups	4.50	1	4.50	6.47*	.00
	Within Groups	1123.32	1618	.70		
Participants who are all from different school and districts	Between Groups	1.69	1	1.69	1.34	
	Within Groups	2028.63	1616	1.26		
Evaluation is done by online questionnaire	Between Groups	1.52	1	1.52	1.15	
	Within Groups	2129.20	1618	1.32		
Evaluation is done by several methods	Between Groups	.02	1	.02	.02	
	Within Groups	2015.22	1617	1.25		
Evaluation as follow-up tests in the future	Between Groups	8.41	1	8.41	6.49*	.00
	Within Groups	2098.84	1619	1.30		

* $p<.05$

4.2.2.2 Effect of Subject Area

The hypothesis that there is not a significant difference in teachers' reported preferences to their subject area was tested, and rejected for preferences of *content be determined after analysis of teacher needs* (Classroom teacher: *M*=4.03, *SD*=.99; Mathematics: *M*=4.03, *SD*=1.10; Science and Technology: *M*=3.86, *SD*=1.52; Turkish: *M*=3.96, *SD*=1.16; English: *M*=4.19, *SD*=1.05; Social Sciences: *M*=3.94, *SD*=1.13; $F(5, 1655)=2.58$, $p<.05$), and *required materials and sources be announced before course starts* (Classroom teacher: *M*=4.02, *SD*=.87; Mathematics: *M*=4.00, *SD*=.92; Science and Technology: *M*=3.87, *SD*=.90; Turkish: *M*=4.02, *SD*=.90; English: *M*=4.15, *SD*=.88; Social Sciences: *M*=3.97, *SD*=.96; $F(5, 1656)=2.46$, $p<.05$)since the mean differences between Classroom, Mathematics, Science and Technology, Turkish, English, and Social Sciences teachers were found statistically significant. Subject area has small effects on the preferences since it accounts for 1% of the variances. Nevertheless, there were not significant mean differences between teachers' other in-service preferences with respect to their subject area (Table 4.19).

Table 4.19

Effect of Subject Area on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	15.22	5	3.04	2.58*	.01
	Within Groups	1947.77	1650	1.18		
Required materials and sources are announced before course starts	Between Groups	9.92	5	1.98	2.46*	.01
	Within Groups	1329.10	1651	.81		
Content is lectured by instructors then supported by activities	Between Groups	2.32	5	.46	.55	
	Within Groups	1388.43	1652	.84		
Content is discussed by participants before being lectured on by instructors	Between Groups	6.78	5	1.36	1.24	
	Within Groups	1795.12	1647	1.09		

*$p<.05$

Table 4.19 (continued)

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Instructors are academicians	Between Groups	5.15	5	1.03	1.15	
	Within Groups	1475.57	1652	.89		
Courses that are given in June seminar term	Between Groups	7.73	5	1.55	.67	
	Within Groups	3803.44	1652	2.30		
Courses that are given in September seminar term	Between Groups	6.52	5	1.30	.72	
	Within Groups	2987.90	1645	1.82		
Participants who are all teachers	Between Groups	9.33	5	1.87	1.84	
	Within Groups	1671.97	1649	1.01		
Participants who are all from the same subject area	Between Groups	3.20	5	.64	.60	
	Within Groups	1778.60	1654	1.08		
Participants who are all participate with voluntarily	Between Groups	.75	5	.15	.22	
	Within Groups	1152.78	1646	.70		
Participants who are all from different school and districts	Between Groups	2.79	5	.56	.45	
	Within Groups	2047.06	1644	1.25		
Evaluation is done by online questionnaire	Between Groups	7.79	5	1.56	1.19	
	Within Groups	2157.13	1646	1.31		
Evaluation is done by several methods	Between Groups	2.75	5	.55	.44	
	Within Groups	2061.23	1647	1.25		
Evaluation as follow-up tests in the future	Between Groups	8.78	5	1.76	1.38	
	Within Groups	2104.45	1647	1.28		

* $p<.05$

To test the significant mean differences within the groups, Dunnet C post hoc test was employed due to the significant test results of Levene's Test of Equity of Variances. The test indicated that English teachers reported preference for *content that is determined after analysis of teacher needs* and *required materials and*

sources be announced before course starts when compared to Science and Technology teachers. There were not significant mean differences in other preferences among teachers by subject taught. It is possible to say that in general in-service training preferences did not show difference with respect to teachers' subject area.

4.2.2.3 Effect of Teaching Experience

To test the hypothesis that there is not a significant difference in teachers' preferences to their teaching experience, one-way ANOVA was used. The results are presented in Table 4.20.

Table 4.20

Effect of Teaching Experience on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	44.84	3	14.95	12.93*	.02
	Within Groups	1910.15	1652	1.16		
Required materials and sources are announced before course starts	Between Groups	14.50	3	4.83	6.00*	.01
	Within Groups	1331.44	1653	.81		
Content is lectured by instructors then supported by activities	Between Groups	12.31	3	4.10	4.93*	.01
	Within Groups	1377.86	1654	.83		
Content is discussed by participants before being lectured on by instructors	Between Groups	3.06	3	1.02	.94*	.00
	Within Groups	1789.98	1649	1.09		
Instructors are academicians	Between Groups	1.72	3	.57	.65	
	Within Groups	1468.86	1655	.89		
Courses that are given in June seminar term	Between Groups	159.63	3	53.21	24.09*	.04
	Within Groups	3656.25	1655	2.21		

Table 4.20 (continued)

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Courses that are given in September seminar term	Between Groups	70.72	3	23.57	13.30*	.02
	Within Groups	2920.56	1648	1.77		
Participants who are all teachers	Between Groups	1.89	3	.63	.62	
	Within Groups	1687.01	1653	1.02		
Participants who are all from the same subject area	Between Groups	1.68	3	.56	.52	
	Within Groups	1787.71	1657	1.08		
Participants who are all participate with voluntarily	Between Groups	5.29	3	1.76	2.52*	.01
	Within Groups	1152.39	1649	.70		
Participants who are all from different school and districts	Between Groups	2.98	3	.99	.80	
	Within Groups	2056.23	1647	1.25		
Evaluation is done by online questionnaire	Between Groups	11.21	3	3.74	2.87*	.01
	Within Groups	2141.63	1649	1.30		
Evaluation is done by several methods	Between Groups	8.19	3	2.73	2.20	
	Within Groups	2045.46	1650	1.24		
Evaluation as follow-up tests in the future	Between Groups	1.41	3	.47	.37	
	Within Groups	2116.08	1650	1.28		

* $p<.05$

According to Table 4.20 hypothesis was rejected for preferences of *content be determined after analysis of teacher needs* (0-5 years: *M*=4.10, *SD*=1.05; 6-10 years: *M*=4.08, *SD*=1.01; 11-15 years: *M*=3.95, *SD*=1.10; 16 or more years: *M*=3.63, *SD*=1.21; *F*(3, 1653)=12.93, $p<.05$)*, required materials and sources be announced before course starts* (0-5 years: *M*=4.04, *SD*=.88; 6-10 years: *M*=4.07, *SD*=.87; 11-15 years: *M*=4.02, *SD*=.93; 16 or more years: *M*=3.79, *SD*=.95; *F*(3, 1656)=6.00, $p<.05$)*, content be lectured by instructors than supported by activities* (0-5 years: *M*=4.10, *SD*=.92; 6-10 years: *M*=4.17, *SD*=.86; 11-15 years: *M*=3.98, *SD*=.95; 16 or more years: *M*= 3.92, *SD*=.96; *F*(3, 1657)=4.93, $p<.05$)*, courses*

that are given in June seminar term (0-5 years: *M*=3.28, *SD*=1.60; 6-10 years: *M*=3.90, *SD*=1.41; 11-15 years: *M*=3.86, *SD*=1.43; 16 or more years: *M*=3.96, *SD*=1.35; *F*(3, 1658)=24.09, *p*<.05)*, courses that are given in September seminar term* (0-5 years: *M*=3.56, *SD*=1.43; 6-10 years: *M*=4.00, *SD*=1.24; 11-15 years: *M*=4.02, *SD*=1.23; 16 or more years: *M*=3.89, *SD*=1.30; *F*(3, 1651)=13.30, *p*<.05)*, evaluation be done by online questionnaire* (0-5 years: *M*=3.63, *SD*=1.13; 6-10 years: *M*=3.64, *SD*=1.11; 11-15 years: *M*=3.71, *SD*=1.11; 16 or more years: *M*=3.43, *SD*=1.14; *F*(3, 1652)=2.87, *p*<.05) since mean differences between the groups were found significant. Teaching experience has small, and small to medium effects on the preferences of teachers since it accounts for 2%, 1%, 1%, 0 percent, 4%, 2%, 1%, and 1% of the variances, respectively. Furthermore, there were not significant differences on teachers' other preferences with respect to teaching experience.

To investigate the pair-wise differences among the groups, post hoc comparison test was performed. Dunnet C test results indicated that teachers with 0-5 years, 6-10 years and 11-15 years teaching experience reported preference for *content is determined after analysis of teacher needs,* and *required materials and sources are announced before course starts* when compared to teachers with 16 or more year experience. Similarly, teachers with 6-10 years experience preferred *content is lectured by instructors than supported by* when compared to teachers with 11-15 years and 16 or more years experience. Moreover, teachers with 6-10 years, 11-15 years, and 16 or more years experience preferred *courses that are given before school finishes (June seminar term),* and *courses that are given before school starts (September seminar term)* when compared to teachers with 0-5 years experience. Finally, teachers with 11-15 years experience reported preference for *evaluation is done by online questionnaire* when compared to teachers with 16 or more years experience. It is possible to summarize these results as the preferences of teachers who have 16 or more years teaching experience differ from the preferences of teachers who have less teaching experience.

4.2.2.4 Effect of Faculty Graduated

To test the hypothesis that there is not a significant difference in teachers' preferences to their graduate faculty, one-way ANOVA was used. The results are presented in Table 4.21.

Table 4.21

Effect of Faculty Graduated on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	10.16	1	10.16	8.65*	.01
	Within Groups	1973.83	1680	1.18		
Required materials and sources are announced before course starts	Between Groups	4.14	1	4.14	5.14*	.00
	Within Groups	1353.74	1680	.81		
Content is lectured by instructors then supported by activities	Between Groups	3.34	1	3.34	4.02*	.00
	Within Groups	1396.68	1682	.83		
Content is discussed by participants before being lectured on by instructors	Between Groups	.57	1	.57	.53	
	Within Groups	1819.28	1675	1.09		
Content is discussed by participants before being lectured on by instructors	Between Groups	.57	1	.57	.53	
	Within Groups	1819.28	1675	1.09		
Instructors are academicians	Between Groups	1.35	1	1.35	1.52	
	Within Groups	1494.67	1682	.89		
Courses that are given in June seminar term	Between Groups	3.90	1	3.90	1.69	
	Within Groups	3881.47	1682	2.31		
Courses that are given in September seminar term	Between Groups	2.59	1	2.59	1.43	
	Within Groups	3036.28	1675	1.81		

*$p<.05$

Table 4.21 (continued)

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Participants who are all teachers	Between Groups	5.51	1	5.51	5.46*	.00
	Within Groups	1693.70	1679	1.01		
Participants who are all from the same subject area	Between Groups	.52	1	.52	.49	
	Within Groups	1812.30	1685	1.08		
Participants who are all participate with voluntarily	Between Groups	.64	1	.64	.91	
	Within Groups	1168.94	1677	.70		
Participants who are all from different school and districts	Between Groups	.09	1	.09	.07	
	Within Groups	2079.64	1674	1.24		
Evaluation is done by online questionnaire	Between Groups	.58	1	.58	.44	
	Within Groups	2194.41	1677	1.31		
Evaluation is done by several methods	Between Groups	9.74	1	9.74	7.84*	.01
	Within Groups	2084.09	1678	1.24		
Evaluation as follow-up tests in the future	Between Groups	2.74	1	2.74	2.14	
	Within Groups	2155.24	1678	1.28		

* $p<.05$

There is not a significant difference between preferences of *content be determined after analysis of teacher needs* (Faculty of education: *M*=4.04, *SD*=1.08; others: *M*=4.84, *SD*=1.12; *F*(1, 1681)=8.65, $p<.05$)*, required materials and sources be announced before course starts* (Faculty of education: *M*=4.03, *SD*=.88; others: *M*=3.91, *SD*=.95; *F*(1, 1681)=5.14, $p<.05$)*, content be lectured by instructors than supported by activities* (Faculty of education: *M*=4.09, *SD*=.90; others: *M*=3.98, *SD*=.95; *F*(1, 1683)=4.02, $p<.05$)*, participants who are all teachers*(Faculty of education: *M*=3.99, *SD*=.99; others: *M*=3.85, *SD*=1.06; *F*(1, 1680)=5.46, $p<.05$)*,* and *evaluation is done by several methods* (Faculty of education: *M*=3.62, *SD*=1.10; others: *M*=3.43, *SD*=1.18; *F*(1, 1679)=7.84, $p<.05$) with respect to their faculty graduated. Results showed that teachers graduated from other faculties

preferred *content is determined after analysis of teacher needs* when compared to teachers from faculty of education. On the contrary, teachers graduated from faculty of education preferred *required materials and sources are announced before course starts, content is lectured by instructors than supported by activities, participants who are all teachers,* and *evaluation is done by several methods* when compared to teachers graduated from other faculties. However, there were not significant mean differences between teachers' other preferences with respect to teachers' faculty graduated.

When partial eta squares were examined, it could be seen that faculty graduated has very small, and small effects on the preferences since it accounts for 1%, 0 percent, 0 percent, 0 percent, and 1% of the variances respectively which means the differences between groups on these variables were statistically significant but not practically significant. That is, the faculty graduated does not make a difference on teachers' preferences which means teachers who graduated from faculty of education and who graduated from other faculties have the same preferences.

4.2.2.5 Effect of Education Level

The hypothesis that there is not a significant difference in teachers' reported preferences to their education level was tested by employing one-way ANOVA. The results are summarized in Table 4.22

Table 4.22

Effect of Education Level on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	18.32	2	9.16	7.89*	.01
	Within Groups	1914.63	1650	1.16		
Required materials and sources are announced before course starts	Between Groups	2.02	2	1.01	1.26	
	Within Groups	1329.89	1653	.81		

*$p<.05$

Table 4.22 (continued)

Items	*Sources*	*SS*	*df*	*MS*	*F*	η^2
Content is lectured by instructors then supported by activities	Between Groups	.53	2	.27	.32	
	Within Groups	1374.77	1653	.83		
Content is discussed by participants before being lectured by instructors	Between Groups	1.31	2	.65	.60	
	Within Groups	1787.32	1647	1.09		
Instructors are academicians	Between Groups	8.15	2	4.07	4.59*	.01
	Within Groups	1467.98	1655	.89		
Courses that are given in June seminar term	Between Groups	1.98	2	.99	.43	
	Within Groups	3813.65	1654	2.31		
Courses that are given in September seminar term	Between Groups	3.06	2	1.53	.84	
	Within Groups	3003.11	1647	1.82		
Participants who are all teachers	Between Groups	3.16	2	1.58	1.56	
	Within Groups	1674.94	1651	1.02		
Participants who are all from the same subject	Between Groups	.85	2	.43	.40	
	Within Groups	1776.85	1655	1.07		
Participants who are all participate with voluntarily	Between Groups	2.28	2	1.14	1.64	
	Within Groups	1147.81	1648	.70		
Participants who are all from different school and districts	Between Groups	1.16	2	.578	.46	
	Within Groups	2052.62	1645	1.25		
Evaluation is done by online questionnaire	Between Groups	1.66	2	.83	.63	
	Within Groups	2157.11	1648	1.31		
Evaluation is done by several methods	Between Groups	.82	2	.41	.33	
	Within Groups	2053.81	1648	1.25		
Evaluation as follow-up tests in the future	Between Groups	.06	2	.03	.03	
	Within Groups	2122.59	1648	1.29		

* $p<.05$

The hypothesis was rejected for preferences of *content is determined after analysis of teacher needs* (Pre-undergraduate: *M*=3.59, *SD*=1.22; undergraduate: *M*=4.02, *SD*=1.07; graduate: *M*=4.15, *SD*=.98; *F*(2, 1652)=7.89, *p*<.05)*,* and *instructors are academicians* (Pre-undergraduate: *M*=4.04, *SD*=1.06; undergraduate: *M*=4.34, *SD*=.94; graduate: *M*=4.32, *SD*=.92; *F*(2, 1657)=4.59, *p*<.05) since the mean differences between teachers' education level were found significant (Table 4.22). Education level has small effect on the preferences since it accounts for 1%, and 1% percent of the variances respectively.

To explore the pair-wise differences among groups, post hoc analysis was performed as a further step. Dunnet C post hoc test results showed that teachers with undergraduate and graduate education level reported preference for *content is determined after analysis of teacher needs,* and *instructors are academicians* when compared to teachers with pre-undergraduate education level. That is, there was not a difference between in-service training preferences of teachers who had graduate and undergraduate education level. However, both education levels' preferences differ from pre-undergraduate education level.

4.2.2.6 Effect of School Type

The hypothesis that there is not a significant difference in teachers' reported preferences to their school type was tested by using one-way ANOVA. Test results are presented in Table 4.23.

Table 4.23

Effect of School Type on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	.03	1	.03	.03	
	Within Groups	1983.97	1680	1.18		
Required materials and sources are announced before course starts	Between Groups	.65	1	.65	.80	
	Within Groups	1357.24	1680	.81		

*p<.05

Table 4.23 (continued)

Items	*Sources*	*SS*	*df*	*MS*	*F*	η^2
Content is lectured by instructors then supported by activities	Between Groups	.08	1	.08	.09	
	Within Groups	1399.94	1682	.83		
Content is discussed by participants before being lectured by instructors	Between Groups	.81	1	.81	.75	
	Within Groups	1819.04	1675	1.09		
Instructors are academicians	Between Groups	.17	1	.17	.19	
	Within Groups	1495.85	1682	.89		
Courses that are given in June seminar term	Between Groups	6.58	1	6.58	2.85	
	Within Groups	3878.78	1682	2.31		
Courses that are given in September seminar term	Between Groups	8.48	1	8.48	4.69*	.00
	Within Groups	3030.39	1675	1.81		
Participants who are all teachers	Between Groups	2635.91	1670			
	Within Groups	1.80	1	1.80	1.78	
Participants who are all from the same subject area	Between Groups	1699.20	1680			
	Within Groups	.89	1	.89	.82	
Participants who are all participate with voluntarily	Between Groups	1812.83	1686			
	Within Groups	.03	1	.03	.05	
Participants who are all from different school and districts	Between Groups	1169.58	1678			
	Within Groups	.26	1	.26	.21	
Evaluation is done by online questionnaire	Between Groups	2079.73	1675			
	Within Groups	1.91	1	1.91	1.46	
Evaluation is done by several methods	Between Groups	2194.99	1678			
	Within Groups	.11	1	.11	.09	
Evaluation as follow-up tests in the future	Between Groups	2093.83	1679			
	Within Groups	.00	1	.00	.00	

* $p<.05$

The hypothesis was rejected for preference of *courses given before school starts (September seminar term)* (Regular primary: *M*=3.81, *SD*=1.34; others: *M*=3.31, *SD*=1.57; *F*(1, 1670)=4.469, *p*<.05) category since the mean differences between males and females were found significant. Therefore, teachers working at regular primary schools reported preference *courses given in September seminar term* when compared to teachers working at other type of primary schools. School type has a very small effect on this preference since it accounts for nearly 0 percent of the variance. That is, the differences between teachers with respect to their school type on this variable were statistically significant but not practically significant. As in the needs section, the preferences of teachers do not show differences with respect to school type that they work which means that teachers who work at regular primary schools and teachers who work at other types of schools have similar preferences.

4.2.2.7 Effect of Employment Type

To test the hypothesis that there is not a significant difference in teachers' reported preferences to their employment type, One-way ANOVA was conducted. The hypothesis was rejected for preferences of *content is determined after analysis of teacher needs* (Tenured: *M*=4.03, *SD*=1.07; others: *M*=3.80, *SD*=1.17; *F*(1, 1781)=7.04, *p*<.05)*, courses that are given before school finishes (June seminar term)* (Tenured: *M*=3.68, *SD*=1.51; others: *M*=3.29, *SD*=1.54; *F*(1, 1783)=10.42, *p*<.05)*, courses that are given before school starts (September seminar term)* (Tenured: *M*=3.85, *SD*=1.33; others: *M*=3.37, *SD*=1.40; *F*(1, 1776)=20.37, *p*<.05)*, participants who are all teachers* (Tenured: *M*=3.99, *SD*=1.00; others: *M*=3.74, *SD*=1.04; *F*(1, 1780)=10.59, *p*<.05)*, participants who are all from the same subject area* (Tenured: *M*=3.92, *SD*=1.03; others: *M*=3.08, *SD*=1.54; *F*(1, 1786)=4.57, *p*<.05)*, participants who are all participate with voluntarily* (Tenured: *M*=4.40, *SD*=.82; others: *M*=4.14, *SD*=.96; *F*(1, 1778)=15.80, *p*<.05)*,* and *evaluation is done by online questionnaire* (Tenured: *M*=3.64, *SD*=1.13; others: *M*=3.43, *SD*=1.23; *F*(1, 1778)=5.48, *p*<.05) since the mean differences between teachers working as a tenured position type and in other types were found

statistically significant. Employment type has very small to small effects on the preferences since it accounts for nearly 0 percent, 1%, 1%, 1%, 1%, and nearly 0 percent of the variances respectively. The results are presented in Table 4.24.

Table 4.24

Effect of Employment Type on Teachers' In-service Preferences

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Content is determined after analysis of teacher needs	Between Groups	8.28	1	8.28	7.04*	.00
	Within Groups	1975.72	1680	1.18		
Required materials and sources are announced before course starts	Between Groups	1.33	1	1.33	1.64	
	Within Groups	1356.56	1680	.81		
Content is lectured by instructors then supported by activities	Between Groups	1.60	1	1.60	1.93	
	Within Groups	1398.41	1682	.83		
Content is discussed by participants before being lectured by instructors	Between Groups	.28	1	.28	.26	
	Within Groups	1819.57	1675	1.09		
Instructors are academicians	Between Groups	1.61	1	1.61	1.82	
	Within Groups	1494.41	1682	.89		
Courses that are given in June seminar term	Between Groups	23.91	1	23.91	10.42*	.01
	Within Groups	3861.45	1682	2.30		
Courses that are given in September seminar term	Between Groups	36.50	1	36.50	20.37*	.01
	Within Groups	3002.37	1675	1.79		
Participants who are all teachers	Between Groups	10.65	1	10.65	10.59*	.01
	Within Groups	1688.55	1679	1.01		
Participants who are all from the same subject area	Between Groups	4.91	1	4.91	4.57*	.01
	Within Groups	1807.92	1685	1.07		
Participants who are all participate with voluntarily	Between Groups	10.91	1	10.91	15.80*	.01
	Within Groups	1158.66	1677	.69		

* $p<.05$

Table 4.24 (continued)

Items	Sources	*SS*	*df*	*MS*	*F*	η^2
Participants who are all are from different school and districts	Between Groups	.72	1	.72	.58	
	Within Groups	2079.01	1674	1.24		
Evaluation is done by online questionnaire	Between Groups	7.15	1	7.15	5.48*	.00
	Within Groups	2187.84	1677	1.31		
Evaluation is done by several methods	Between Groups	1.73	1	1.73	1.39	
	Within Groups	2092.10	1678	1.25		
Evaluation is done as follow-up tests in the future	Between Groups	.01	1	.01	.01	
	Within Groups	2157.98	1678	1.29		

*p<.05

Teachers who have tenured position at their work reported preference for *content is determined after analysis of teacher needs, courses that are given before school finishes (June seminar term), courses that are given before school starts (September seminar term), participants who are all teachers, participants who are all from the same subject area, participants who are all participate with voluntarily,* and *evaluation is done by online questionnaire* when compared to teachers who have not tenured position at their works. However, there were not significant mean differences between teachers' other in-service training preferences with respect to their position type. In addition, there were not significant mean differences between teachers' other in-service training preferences with respect to their position type.

4.2.3 Previous In-service Training Experiences of Teachers

To answer the research question "How do teachers rate the appropriateness and effectiveness of in-service course content, instructors, organization, training centers, participants, and assessment and evaluation methods?", teachers' opinion on their previous training experiences with respect to contents, instructors, organization, training centers, participants, and assessment and evaluation of

training programs is presented in terms of means and standard deviations. The range of the scale (which was 4) was divided by the number of scale points (which was 5), and the result (0.80) was used to determine the size of each unit of a transformed scale. Therefore, the 5-point scale was interpreted so that a response of 1-1.80 indicates "not valid for programs," 1.81-2.60 indicates "valid for few training programs," 2.61-3.40 indicates "valid for half of training programs," 3.41-4.20 indicates "valid for most of training programs," and 4.21- 5.00 indicates "valid for all training programs.

4.2.3.1 Participants of Previous Training Programs

Participants of the study reported that in most of the previous training programs, all of the participants were teachers (*M*=4.13, *SD*=1.11), and they had nearly the same education level (*M*=3.82, *SD*=1.01). For half of the previous training programs, participants were highly motivated (*M*=3.24, *SD*=1.01), active during the training (*M*=3.01, *SD*=1.05), and they had the same subject area (*M*=2.66, *SD*=1.08). Teachers' opinions on the participants of in-service training programs that teachers have attended are presented in Table 4.25.

Table 4.25

Opinions on Participants of Previous Training Programs (*N*=1730)

Items	*M*	*SD*
All of them were teachers.	4.13	1.11
They had nearly the same education level.	3.82	1.01
They were highly motivated.	3.24	1.01
They were active during the training.	3.01	1.05
Their subject areas were the same with each other.	2.66	1.08

4.2.3.2 Contents of Previous Training Programs

Teachers' reported that for most of the previous courses, contents were understandable (*M*=3.56, *SD*=.99). In addition, for half of the past training programs' contents were up-to-date (*M*=3.24, *SD*=1.06), contributed in

professional sense (*M*=3.11, *SD*=1.05), their density was within acceptable level (*M*=3.11, *SD*=.96), met with their theoretical needs (*M*=3.09, *SD*=1.05), were presented with the real classroom situations (*M*=3.00, *SD*=1.05), increased teachers' interest and attention to the subject (*M*=2.93, *SD*=1.07), provided teachers personal benefits besides teaching (*M*=2.83, *SD*=1.14), and met teachers' needs in application level (*M*=2.73, *SD*=1.03). Teachers' opinions on the contents of in-service training programs that teachers have attended are presented in Table 4.26.

Table 4.26

Opinions on Content of Previous Training Programs (*N*=1730)

Items	*M*	*SD*
They were understandable for me.	3.56	.99
They were up-to date.	3.24	1.06
Content contributed in professional sense.	3.11	1.05
Density was within acceptable level.	3.11	.96
They met with my theoretical needs.	3.09	1.05
Content were presented with real classroom situations.	3.00	1.06
Content increased my interest and attention to subject.	2.93	1.07
Content provided personal benefits besides teaching.	2.83	1.14
They met my needs in application level.	2.73	1.03

4.2.3.3 Instructors of Previous Training Programs

Teachers' opinions on the instructors of in-service training programs that teachers have attended are presented in Table 4.27.

Table 4.27

Opinions on Instructors of Previous Training Programs (*N*=1730)

Items	*M*	*SD*
Presented content clearly.	3.18	1.03
Gave satisfactory answers to content related questions.	3.11	1.04
Used time effectively.	3.08	1.05
Noticed participants' pre-existing knowledge.	3.05	1.04
Used appropriate materials in training content.	3.04	1.07
Offered course in an appropriate pace for participants.	3.03	1.02
Shared training materials with participants.	3.00	1.14

Table 4.27 (continued)

Items	*M*	*SD*
Used materials that facilitate learning.	2.99	1.06
Made us to evaluate their courses at the end of the program.	2.99	1.16
Used materials that assist understanding of the subject.	2.95	1.04
Preferred appropriate teaching methods.	2.94	1.02
I satisfied with their classroom management skills.	2.92	1.06
Encouraged active participation to the course.	2.91	1.04
Used sources and materials properly.	2.87	1.02
Offered course to increase my learning interest.	2.82	1.05
Made a connection between subject area and course content.	2.82	1.04
Chose materials that could be used after training.	2.81	1.07

Table 4.27 indicates that teachers rated all items between the mean score of 3.18 and 2.81 which means that participants of the study pointed all the items related with instructors as valid for the half of the training programs that they have participated.

4.2.3.4 Organization of Previous Training Programs

Teachers' opinions on the organization of in-service training programs that teachers have attended are presented in Table 4.28.

Table 4.28

Opinions on Organization of Previous Training Programs (*N*=1730)

Items	*M*	*SD*
Announcements of program participation were done on time.	3.42	1.15
The places of the courses were appropriate.	3.25	1.14
Announcements done throughout programs were appropriate.	3.12	1.06
The dates of the courses were appropriate.	3.05	1.16
The information given before the courses was enough.	2.91	1.12
Some necessities were met like notebook, pen, computer etc.	2.49	1.24

According to teachers' reports, in most of the programs, announcements of program participation were done on time (*M*=3.42, *SD*=1.15). In half of the previous training programs, the places were appropriate (*M*=3.25, *SD*=1.14),

announcements done throughout the programs were appropriate (*M*=3.12, *SD*=1.06), dates of the courses were appropriate (*M*=3.05, *SD*=1.16), and the information given before the courses was enough (*M*=2.91, *SD*=1.12). Finally, teachers reported that in only few training programs, some necessities like notebook, pen, computer were met (*M*=2.49, *SD*=1.24).

4.2.3.5 Training Centers of Previous Training Programs

Teachers' opinions on the training centers of in-service training programs that teachers have attended are presented in Table 4.29.

Table 4.29

Opinions on Training Centers of Previous Training Programs (*N*=1730)

Items	*M*	*SD*
Halls were appropriate for learning in terms of lighting.	3.18	1.12
Halls were appropriate for learning in terms of width.	3.17	1.13
Coordinators' approach to problems was appropriate.	3.08	1.02
Coordinators provided effective execution of training.	3.04	1.02
Halls were appropriate for learning in term of technical equipment.	2.91	1.08
Halls were appropriate for learning in terms of temperature.	2.82	1.19
Food and refreshments offered during the courses were enough.	1.91	1.13

Table displays that in half of the previous training programs, halls were appropriate in terms of lighting (*M*=3.18, *SD*=1.12), and width (*M*=3.17, *SD*=1.13), coordinators' approach to problems was appropriate (*M*=3.08, *SD*=1.02), coordinators provided effective execution of training (*M*=3.04, *SD*=1.02), and halls were appropriate for learning in terms of technical equipment (*M*=2.91, *SD*=1.08), and temperature (*M*=2.82, *SD*=1.19). Finally, teachers reported that for none of the previous programs, food and refreshments offered during the courses were enough (*M*=1.91, *SD*=1.13). That is, while teachers reported all items as "valid for half of the training programs", they rated the item food and refreshments offered during the courses were enough as "valid for few in-service training programs."

4.2.3.6 Evaluation of Previous Training Programs

Teachers' opinions on the evaluation of in-service training programs that teachers have attended are presented in Table 4.30. According to Table 4.30 teachers pointed all items as valid for half of the previous training programs that they have attended.

Table 4.30

Opinions on Evaluation of Previous Training Programs (*N*=1730)

Items	*M*	*SD*
Evaluation was fair.	3.34	1.15
In the evaluation, questions were clear.	3.17	1.07
In the evaluation, questions covered whole content.	3.13	1.06
Learning was evaluated at the end of the course.	3.12	1.16
I was satisfied with evaluation techniques used in courses.	2.93	1.11
In the evaluation, more than one method was used.	2.74	1.11

4.3 Structural Equation Modeling of In-Service Training Needs

The purpose of this section was to find a response to "which variables explain in-service training needs of teachers."To explore the predictors of teachers' in-service training needs regarding different domains of teachers' professional development, SEM was performed using MPlus 5.2. Since SEM provides an opportunity to measure indirect relationships between different variables (Kline, 2004), it is preferred to Multiple Linear Regression analysis. Before running SEM, mean scores of in-service training needs and opinions on the previous training experiences, called evaluation variables, were computed, and necessary assumptions were checked before starting the analysis.

Sample size: Although there is not a consensus on the appropriate size of sample for SEM analysis (Weston & Gore, 2006), Kline (1998) supports the 10 to 20 participants per estimated parameter, on the other hand, McCallum, Browne, and Sugawara (1996) suggest using sample size appropriate with the complexity of the

model. Furthermore, Weston and Gore (2006) suggest minimum 200 participants for the SEM analysis. The sample size of this study seems appropriate for SEM analysis.

Normality: The normality of scores was obtained by checking skewness-kurtosis values, histograms, and q-q plots. Among the skewness-kurtosis values, there were no values exceeding the range of -3 and +3 which provide normality of scores (Tabachnick & Fidell, 2007).

Multicollinearity: Since the strong correlations (>.85) among items generally cause redundancy that generates unreliable path loadings (Weston & Gore, 2006), it was checked by examining a correlation matrix. The correlation allows us to detect multicollinearity among the variables. None of the correlations in the matrix exceed .90 which indicates the absence of multicollinearity (Tabachnick & Fidell, 2007). According to correlation table, there were no significant relationship between evaluation of previous experiences and Need Factor 4, Need Factor 5, Need Factor 7, Need Factor 8, and Needs variables. Among the other variables, significant relationships were observed. Correlations among all observed variables and their subscales are presented in Table 4.31.

Table 4.31

Intercorrelations among the Variables

Variables	1	2	3	4	5	6	7	8	9	10
1. Need F1										
2. Need F2	.73*									
3. Need F3	.42*	.48*								
4. Need F4	.42*	.41*	.32*							
5. Need F5	.62*	.58*	.37*	.50*						
6. Need F6	.57*	.56*	.38*	.32*	.44*					
7. Need F7	.55*	.58*	.43*	.40*	.61*	.54*				
8. Need F8	.58*	.58*	.41*	.37*	.51*	.63*	.63*			
9.Needs	.81*	.82*	.65*	.64*	.77*	.74*	.79*	.78*		
10.Evaluation	.06*	.05*	.06*	.03	-.03	.06*	-.02	.04	.04	

* $p<.05$

4.3.1 Confirmatory Factor Analysis

Before starting to analyze whole model, to ensure the factorial validity of Needs, Confirmatory Factor Analysis was conducted through MPlus 5.2. Each factor was represented by F in the model. That is, F1 represents professional teaching knowledge; F2 presents content area knowledge; F3 denotes technology use in education; F4 forms introduction to national and international exams; F5 represents guidance and special education; F6 presents communication and social skills; F7 denotes self-development; and F8 points development of social consciousness factors.

CFA was resulted in a significant chi-square value with 464.70 (df=20, p<.05), CFI value of .93, RMSEA value of .11 and SRMR value of .04. The expected values for a good fitted model data fit interpretation are possible if and only if CFI value is above .95 (Hu & Bentler, 1990), and RMSEA index value is below .06 (Hu & Bentler, 1998, 1999), and SRMR index is below .08 (Marsh, et al., 2004). Considering poor fit index result of CFI and RMSEA, examining the modification indices of errors was decided, and found one error pair between Need F1 (professional teaching knowledge) and Need F2 (content area knowledge). Bollen (1989) suggested to connect the pairs which have high covariance compared to other pairs. Therefore, this pair connected and model was analyzed again.

After the change, CFI value increased to .95 which indicates good fit of model to the data, and RMSEA value decreased to .09 with a significant chi-square value with 366.28 (df=19, p<.05), and SRMR value of .03. Since the chi-square value is sensitive to sample size and affected by large sample sizes (Bryne, 2001; Henson, 2006), other fit indices were taken into consideration. In this sense, RMSEA value was still the sign of the poor fit. However, considering the CFI value is greater than .90 than the model fit is generally accepted (Smith & McMillan, 2001). According to the results, model was seems to adequately fit to the hypothesized model, and Factor 1 and Factor 2 are bonded as in Figure 4.1.

Researcher proposed eight-factor structure for Needs. These factors were professional teaching knowledge, content area knowledge, technology use in education, preparation of national and internationals exams, guidance and special education, communication and social skills, development of social consciousness, and self-development. The standardized estimates range from .50 to .65 of the final CFA model are presented in Figure 4.1.

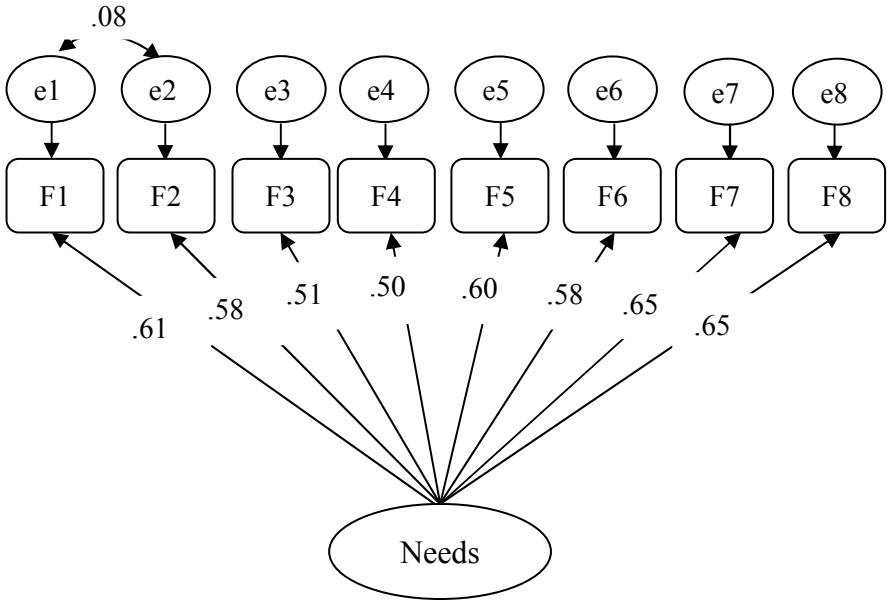

Figure 4.1. Confirmatory Factor Analysis model of needs

4.3.2 Testing the Model

After conducting Confirmatory Factor Analysis, to analyze the whole model, Structural Equation Modeling was employed by utilizing MPlus 5.2. SEM results showed that a significant chi-square value of 1685.22 (df=136, p<.05), CFI value of .80, RMSEA value of .08, and SRMR value of .06. Since the fit indices prove poor fit of the model, modification indices were checked. Modification indices showed that there was a high error pair between self-development activities 1 and self-development activities 2. This pair was also connected and the revised model was tested again.

The SEM results indicated that Chi-Square was a significant value with 1511.55 (*df*=135, *p*<.05), CFI value increased to .84, RMSEA value decreased to .07, and SRMR value was .05. However, based on the criteria mentioned above, overall model was assessed and found results of poor fit. The revised model of the study was presented in Figure 4.2.

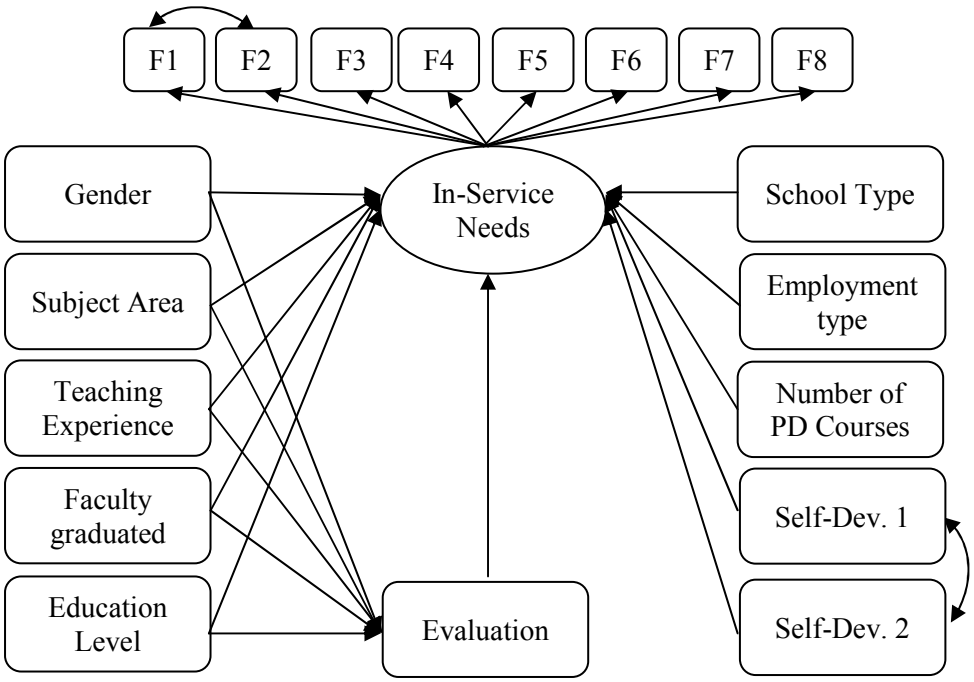

Figure 4.2. Revised hypothesized model

The summary of fit indices gathered from two SEM analyses (initial model and revised model) is presented in Table 4.32.

Table 4.32

Summary of Goodness of Fit Statistics for the Proposed Model and Its Revised Version (*N*=1730)

Goodness of Fit Statistics	χ^2	*df*	*p* value	CFI	RMSEA	SRMR
Initial Model	1685.22	136	.00	.80	.08	.06
Revised Model	1396.79	135	.00	.84	.07	.05

4.4 Summary of the Results

In this chapter, several data analyses are presented in detail to answer the research questions. The data gathered were analyzed through both descriptive and inferential statistics. To determine the content of in-service training programs that teachers need, data were presented in terms of means, standard deviations, and percentages. Figure 4.3 represents the content and topics of in-service training reported as needed by teachers.

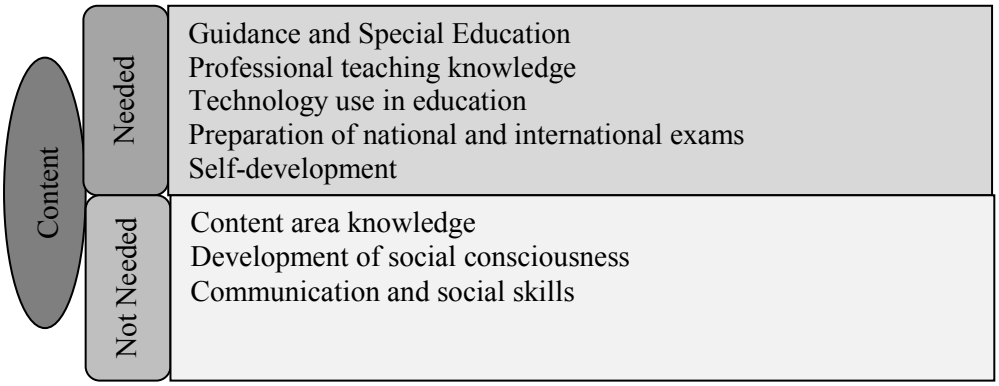

Figure 4.3. Content of training programs

Most highly needed in-service training content/topics were related to guidance and special education. To a lesser extent, teachers also reported needing in-service training on professional teaching knowledge, technology use in education, preparation for national and international exams, and self-development. When these categories are examined more closely, it can be seen that the teachers put emphasis on the training content of "Smart board usage" (*M*=3.57, *SD*=1.18), "Introduction to international exams; PIRLS, TIMSS, and PISA" (*M*=3.50, *SD*=1.21), and "Education of gifted students" (*M*=3.41, *SD*=1.05). However, teachers did not report any interest in training for content area knowledge, development of social consciousness, and communication and social skills.

After determining the content of the in-service training programs that teachers need, second purpose of the study was to get the clues about the form of those

programs. Figure 4.4 represents the form of in-service training programs determined by preferences reported by teachers.

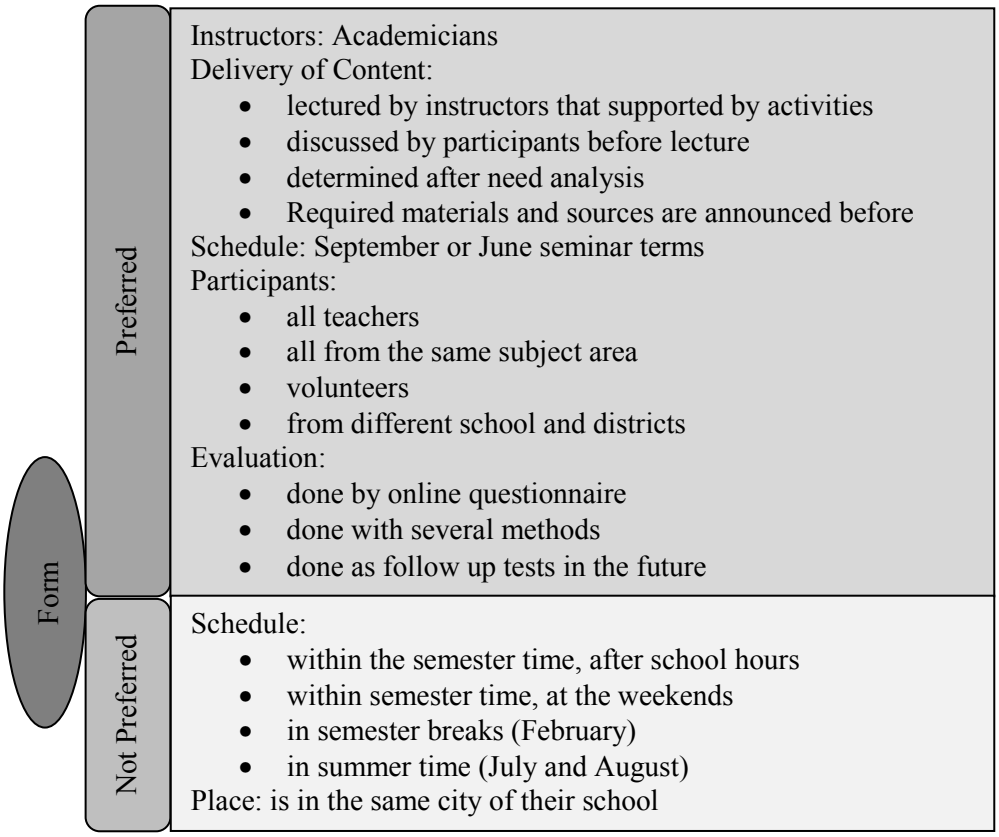

Figure 4.4. Form of training programs

Results indicated that teachers strongly prefer that instructors should be academicians (*M*=4.33, *SD*=.94), and participants should be involved in-service training programs voluntarily (*M*=4.37, *SD*=.84). Furthermore, teachers preferred content be lectured by instructors that supported by activities (*M*=4.07, *SD*=.91), required materials and sources be announced before course starts (*M*=4.01, *SD*=.90), content be determined after need analysis (*M*=4.00, *SD*=1.09), content be discussed by participants before lectured by instructors (*M*=3.79, *SD*=1.04), courses should be in September seminar term (*M*=3.80, *SD*=1.35), or they should be in June seminar term (*M*=3.64, *SD*=1.52), all participants should be teachers (*M*=3.97, *SD*=1.01), all of them should be from the same subject area (*M*=3.91, *SD*=1.04), and from different school and districts (*M*=3.66, *SD*=1.11). On the other

hand, teachers preferred evaluation should be done by online questionnaire (*M*=3.62, *SD*=1.14), with several methods (*M*=3.59, *SD*=1.12), and be as follow up tests in the future (*M*=3.50, *SD*=1.13). Conversely, teachers did not prefer that the courses given within the semester time, after school hours (*M*=1.98, *SD*=1.28), and the courses given within semester time, at the weekends (*M*=1.90, *SD*=1.26). Moreover, they never preferred courses placed in the same city of their school (*M*=1.79, *SD*=1.03), courses given in semester breaks (February) (*M*=1.75, *SD*=1.19), and courses given in summer time (July and August) (*M*=1.69, *SD*=1.18). For the items with the mean value between 2.61 and 3.40 indicated that teachers neither prefer nor not prefer. To make a better conclusion about those items, further information is needed to be collected by qualitative research.

To determine the predictors of in-service training programs, results were explained by both descriptive and inferential statistics. First, the question of "Who needs in-service training?" was explained by the results of one-way analyses of variance. ANOVA results showed that in general female teachers expressed more needs on technology use in education, preparation of international and national examinations, and guidance and special education. In addition, relatively less experienced teachers stated more needs of in-service training on preparation of international and national examinations, guidance and special education, and self-development than more experienced teachers. On the contrary, experienced teachers needed more in-service training on technology use in education than less experienced teachers. Moreover, English teachers stated that they need more in-service training on preparation of international and national examinations than Mathematics teachers. In contrast, all type of teachers rather than Turkish teachers expressed more in-service training needs on self-development than English teachers. Furthermore, teachers graduated from vocational high schools needed more in-service training on technology use in education than the ones who had an educational level of undergraduate or graduate. On the contrary, teachers with graduate education level needed more training on guidance and special education than teachers with pre-undergraduate or undergraduate education level. Teachers who graduated from faculty of education reported more in-service training needs

on self-development than teachers graduated from other faculties. Lastly, teachers who worked in other type of work position needed more training on technology use in education, and preparation of national and international exams than the teachers working in tenured job position. Figure 4.5 represents the audience of in-service training programs.

Figure 4.5. Audiences of training programs based on teacher needs

When partial η^2 values were examined, it was possible to conclude that although there were some statistically significant results of ANOVA, the strength of the relationships between the independent variables (gender, teaching experience, subject area, education level, faculty graduated, school type, and employment type) and the need categories (Guidance and special education, technology usage in education, preparation of inter/national exams, and self-development) is very weak.

In the second section, the answer of "Who prefers some particular features of in-service training programs?" was questioned. To answer this question one-way analysis of variance was employed. The characteristics that have effect on the

preferences were combined in Figure 4.6, and the answer of "Who prefers some particular features of in-service training programs?" are presented.

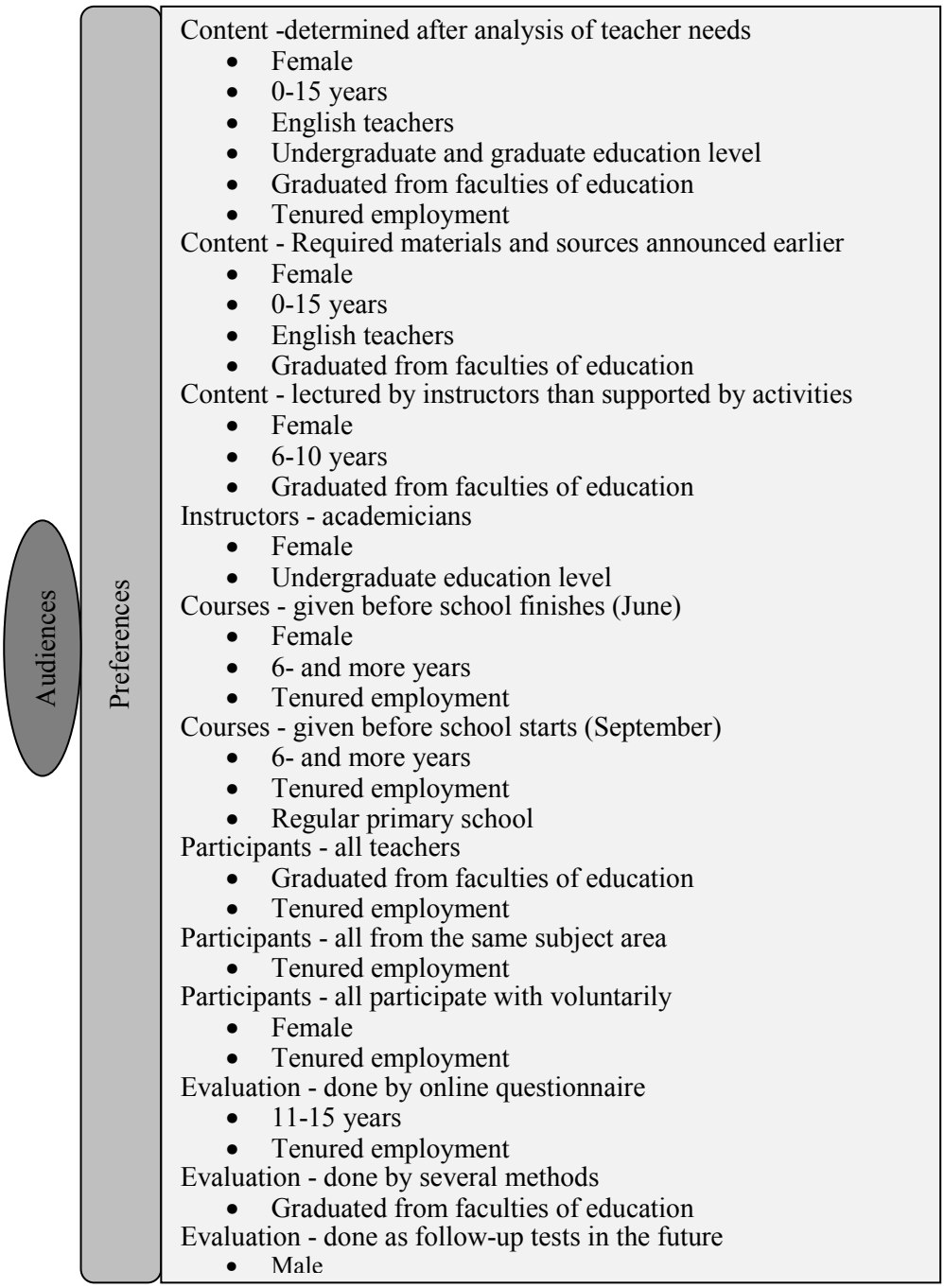

*Figure 4.6.*Audiences of training programs based on teacher preferences

The results of the study indicated that female teachers reported preference for content is determined after analysis of teacher needs, required materials and

sources are announced before course starts, content is lectured by instructors than supported by activities, instructors are academicians, courses that are given before school finishes (June seminar term), participants who are all participate with voluntarily when compared to male teachers. On the contrary, male teacher reported preference for evaluation is done as follow-up tests in the future when compared to female teachers. Furthermore, teachers with 0-15 years teaching experience reported preference for content is determined after analysis of teacher needs, and required materials and sources are announced before course starts when compared to teachers having 16 or more year teaching experience. Teachers who have 6-10 years teaching experience reported preference for content is lectured by instructors than supported by activities when compared to teachers with 11 or more years teaching experience. On the other hand, teacher who have 6 or more years teaching experience reported preference for courses that are given before school finishes (June seminar term), and courses that are given before school starts (September seminar term) when compared to teacher having 0-5 years teaching experience. Teachers with 11-15 years teaching experience reported preference for evaluation is done by online questionnaire when compared to teachers who have 16 or more years teaching experience. Furthermore, English teachers reported preference for content is determined after analysis of teacher needs, and required materials and sources are announced before course starts when compared to Science and Technology teachers. In addition, teachers with undergraduate and graduate education level reported preference for content is determined after analysis of teacher needs when compared to teachers graduated from vocational high schools. Similarly, teachers with undergraduate education level reported preference for academicians as instructors when compared to teachers graduated from vocational high schools.

Moreover, teachers graduated from faculties of education reported preference for content is determined after analysis of teacher needs, required materials and sources are announced before course starts, content is lectured by instructors than supported by activities, participants who are all teachers, and evaluation done by several methods when compared to teachers graduated from other faculties.

Additionally, teachers who work in tenured position reported preferences for content is determined after analysis of teacher needs, courses that are given before school finishes (June seminar term), and courses that are given before school starts (September seminar term), teachers who are all teachers, from the same subject area, and participated voluntarily, and evaluation done by online questionnaire when compared to teachers who work in other type of positions.

Lastly, teachers working at regular primary schools preferred courses that are given before school starts (September seminar term) when compared to teachers working at other type of schools. So far, the data is explained by the effect of each characteristic of teachers.

When partial η^2 values were examined, it was possible to conclude that although there were some statistically significant results of ANOVA, the strength of the relationships between the independent variables (gender, teaching experience, subject area, education level, faculty graduated, school type, and employment type) and the preferences on content, participants, instructors, schedule, and evaluation is very weak.

In the third section, early in-service training experiences of teachers were explained through descriptive statistics. The results pointed out that for at most half of the previous programs, teachers expressed positive opinions about their participants, contents, instructors, organization, training centers and evaluation. Some exceptions are in most and half of the previous training programs, all of the participants were teachers, contents were understandable, and announcements of program participation were done on time. On the contrary, teachers state that in only few training programs, some necessities like notebook, pen, and computer were met, and in none of the previous programs, food and refreshments offered during the courses were enough.

Finally, to signify validity evidence of the needs scale, CFA was conducted. CFA resulted in that there were 8 factors of Needs with mediocre fit. After utilizing

CFA, a structural model was specified and evaluated in terms of fitting the data of teachers. SEM analysis did not yield satisfactory findings. After examining modification indices, some changes were made in the model. Although there were changes, fit indices were not satisfactory; CFI (.84), RMSEA (.07), and SRMR (.05) indicated poor fit of the model to the data. In the next chapter the findings of the analyses are discussed.

CHAPTER V

DISCUSSION

In this chapter, discussions and implications of the results are presented. The results are discussed in the light of previous studies, and implications of the results are presented for practical purposes and for further studies. Discussions of the results are presented in two sections namely content and format of in-service training programs regarding needs, and audiences and previous in-service training programs.

5.1 Discussion of the Results

5.1.1 Content and Format of Training Programs regarding Needs

> "Professional teachers require professional development."
> (Wilson & Berne, 1999, p. 173)

The purpose of this study was to determine the kinds and qualities of in-service training needed by Turkish teachers. Considering the content of the in-service training programs, teachers generally reported occasional need for training on *Guidance and Special Education, Preparation for National and Internationals Exams, Self-Development, Professional Teaching Knowledge,* and *Technology Use in Education*. Furthermore, teachers reported rare need for in-service training on *Content Area Knowledge, Development of Social Consciousness,* and *Communication and Social Skills*. When the content labels of occasionally needed categories were examined, it was inferred from data that teachers only occasionally needed *education of gifted students, education of students with learning disabilities, education of students who need psychological help, educational coaching, education children who work and are at risk, prevention of crime and violence in educational institutions,* and *individual differences in education* under the Guidance and Special Education category; *introduction to*

PIRLS, TIMSS and PISA, introduction to national exam OBBS, and *introduction to changed transition system (SBS)* under the Preparation for National and Internationals Exams category; *learning a foreign language, project planning/management, health and first aid knowledge, speed reading techniques,* and *problem solving methods* under the Self-Development category; *changing paradigms and educational systems*, *new approaches in education*, *planning a social activity*, and *guidance for prospective teachers* under the Professional Teaching Knowledge category; *smart board usage, preparing effective teaching material with flash and similar software,* and *preparing effective teaching material with MS Office software* under the Technology Use in Education category; *curriculum changes/reforms, developing learning material/activity in their subject area, use of learning materials on their subject area,* and *learning new topics in their subject area* under Content Area Knowledge category. For the other labels under these categories teachers reported rare need.

In this study, mean scores of the need for *Guidance and Special Education* and *Technology Use in Education* categories are comparatively high which is in the same line with the OECD's TALIS (2010) report of the areas of most urgent development need of teachers in Turkey were teaching students with special learning needs, and information and communication technologies teaching skills. New curricula in schools ask teachers to attend individual differences. However, most of the teachers have not been trained with respect to giving address to individual differences. In this perspective this study showed that teachers have a concern for individual differences by reporting in-service training needs for education of gifted students, education of students with learning disabilities, education of students who need psychological help, educational coaching, education children who work and are at risk, prevention of crime and violence in educational institutions, and individual differences in education. However, it should not be overlooked that teachers reported only occasional need for these areas, too.

Turkish primary school curricula have been faced with many reforms for the last two decades (Aksit, 2007; Aksit & Sands, 2006; Grossman & Sands, 2008). In

contrast to the Guskey's (2003) findings on the most frequently cited professional development need of teachers was associated with reform initiatives, and even though many researchers strongly support the importance of professional development of teachers for the success of reform movements (Cakiroglu & Cakiroglu, 2003; Guskey, 2002; Sandholtz, 2002), in this study, participants reported only occasional need for curriculum changes/reforms, and learning new topics in their subject area. If the transition system (SBS exam) from primary school to high school can be thought as a kind of output of the primary school programs, due to the low math and science scores of students, the adaptation to new programs and implementation of curricula need to be examined closer, and the reasons of the teachers' negative reports on the need of in-service training programs related with reforms need to be questioned one more time.

To recall the existing literature for this study, teachers reported a range of professional development needs at the different parts of the world. To illustrate, teachers in Southern Cyprus primarily reported training need for student motivation, computer and information techniques, new techniques and methods in teaching, educational reforms and current education programs (Karagiorgi & Symeou, 2007), teachers in Hong Kong indicated training need mostly for innovative instructional techniques, school-based curriculum development, self-development, program adaptation, project-based applications, guidance on student development, and instructional applications of information technologies (Fok et al., 2005), teachers in Missouri pointed learning need for completing reports for local/state administrators, motivating students to learn, developing an effective public relations program, preparing proficiency award applications, integrating science in to curricula, utilizing a local advisory committee, using computers in classroom teaching, supervising students, and teaching with experiments (Garton & Chang, 1997), and teachers in European Union reported need for learning how to integrate new technologies into their classroom settings (EU, 2007). In such a world that teachers from different countries emphasis on their needs for in-service training on some particular topics, not reporting an in-service training need is suspicious, need to be studied closer. Regarding the limitation that individuals generally are not aware of their competencies while they analyze their needs

(Wray, 1989), to reach deeper understanding of whether the low mean scores on the needs of content labels used in this study were arisen from the self-perception of teachers should be studied by employing qualitative research methods. Learning how much teachers knowledgeable about their needs, and how much they are qualified on teaching skills and new knowledge are essential to reach better conclusions about the results of this study.

As a second purpose of this study, preferred implementation characteristics of in-service training programs were examined. Teachers reported their preferred format of the programs in 5 main headings; Namely *Delivery of Content, Instructors, Schedule and Place, Participants,* and *Evaluation.* The results indicated that teachers preferred that *content that is delivered via lecturing by instructors also be supported by activities, required materials and sources be announced before a course starts, content be determined after a needs analysis,* and *content be discussed by participants before being lectured on by instructors* under the Delivery of Content preferences; teachers strongly preferred that *instructors be academicians* under the Instructors preferences; teachers preferred that *courses be scheduled during the September seminar term or during the June seminar term* under Schedule and Place category; teachers strongly preferred that *participants be involved in-service training programs voluntarily*, and they preferred that *all participants be teachers*, *from the same subject area,* and *from different school and districts* under Participants category; and teachers preferred that *evaluation be done by online questionnaire, using multiple methods,* and *the results of evaluation be reflected in improvements of future in-service trainings* under Evaluation category.

First of all, teachers strongly preferred the *volunteerism* in attending in-service training programs. Volunteerism is an important feature of effective training programs, a finding that is supported by many studies indicating positive teacher outcomes when they attend in-service programs voluntarily (Desimone et al., 2003; Supovitz & Zeif, 2000). Furthermore, according to Abdal-Haqq (1995) an effective professional development model should support constructivist

approaches. Teachers in this study emphasized the in-service training program characteristics of *content that is delivered via lecturing by instructors also be supported by activities* and *content be discussed by participants before being lectured on by instructors* which require more active involvement of teachers and some sign of constructivist learning approaches. Cohen, Raudenbush, and Ball (2003) support the need for well-defined and clearly specified programs regarding instructional materials to ensure its effectiveness. In line with this idea, participants in this study also insisted on the announcement of required materials and resources before a course starts. Furthermore, teachers' reports on the in-service training preferences of *content be determined after a needs analysis, all participants be teachers*, *from the same subject area,* and *from different school and districts,* and *the results of evaluation be reflected in improvements of future in-service trainings* are in the same vein with Vukelich and Wrenn's (1999) conclusion: an effective in-service training programs should be based on teachers' needs; be sustainable; involve teachers in raising answers to real-life problems; offer for teachers engagement; help teachers to build up collaborative relationships; and motivate teachers to reflect on their teaching. Similarly, Birman et al. (2000) and Borko (2004) also support the participation of teachers from the same department, subject or grade were more likely to found effective since it fosters active involvement of teachers. In contrast to Desimone et al. (2002) identification of key aspects of high quality professional development that collective participation (as many from the same community or school as possible), in this study, teachers reported preferences for participants' being from different schools and districts. Furthermore, Abdal-Haqq (1995) claims that qualified professional development model should be ongoing, and include both practice and feedback, and Linn, Gill, Sherman, Vaughn, and Mixon (2010) also argue that in promoting teacher learning, an evaluation process is an imperative part of the programs. In this study, teachers also gave emphasis on evaluation and feedback after training programs, and they supported the necessity of future follow-up test components in the in-service training programs so that effectiveness of training programs could be assessed in a better way.

The items that were not preferred by teachers are also important to discuss as well as the preferred ones. Teachers did not prefer that *courses given during the regular semester, nor after school hours*, and if they must be offered during the regular semester time, *in-service programs should not be offered on the weekends,* and, they never prefer courses offered *in the same city as their school, or offered during semester breaks (February),* nor *programs offered during summer time (July and August)*. Therefore, it can be concluded that teachers wanted to only focus on their curriculum and instruction within the semesters, did not prefer to be interrupted by in-service training programs. Additionally, they did not want to attend professional development programs during their holiday times (summer of semester breaks). Hence, they preferred to attend in-service training programs in September and/or June seminar terms. Moreover, their priority to select an instructor of professional development program *academicians* be from universities rather than *instructors be from Ministry of National Education, be school directors, or inspectors.*

In addition, teachers reported neither preference nor not preference for the content labels of *content be taught via questioning, instructors be from Ministry of National Education, be school directors, or inspectors, courses be given as distance education, the participation be an important part in evaluation,* and *evaluation results that are important for recruitment, preferment, etc.* To be able to interpret the results for those items, further information gathered by qualitative research techniques is needed. Vukelich and Wrenn (1999), and Desimone et al. (2002) support the importance of engagement, active learning (learning by doing), and participation in high quality in-service training programs. However, the results of this study indicated that teachers did not have the same opinion; they could not decide whether participation should be an important part in evaluation. Furthermore, in the literature, Abdal-Haqq (1995) claims qualified professional development model should be job-embedded. Related with this, teachers had some doubts about the use of in-service training program' outcomes in such areas like recruitment, preferment, etc.

5.1.2 Audiences and Previous In-service Training Programs

As a second main purpose, this study aimed to reveal whether the responses of teachers change with respect to their characteristics. To reach this purpose, the differences on in-service training needs and preferences between groups with respect to teachers' individual characteristics were explored by using one way ANOVA. The results indicated that teachers' in-service training needs and preferences generally did not show differences with respect to their gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type. There were some statistically significant differences among some groups like the need for *Technology Use in Education* with respect to teachers' gender, *Self-development* with respect to their subject area, *Guidance and Special Education* with respect to teachers' teaching experience, or the preferences for *instructors be academicians* with respect to teachers' gender, *content be determined after analysis of teacher needs* with respect to their subject area, *evaluation is done by several methods* with respect to teachers' faculty graduated. However, those variables that showed statistically significant mean differences among some certain groups had either small effect or not a practically significant effect. Therefore, it can be concluded that in general teachers' in-service training needs and preferences did not show difference regarding their gender, subject area, faculty graduated, education level, teaching experience, school type, and employment type. Although in literature review, there are some significant differences with medium to large effects on teachers' in-service training needs according to their gender (Clarke, 1990; Hursen, 2012; Ross, Hogaboam-Gray, & Hannay, 1999; Yuen & Ma, 2002), teaching experience (Ball & Cohen, l999; Brantner, 1964; Edy, 1969; Featherstone, 1993; Griffin, 1987; Johnson & Kardos, 2002; Marshall & McDavid, 1993; Moyer & Husman, 2000; Ruhland & Bremer, 2002; Shann, 1998), subject matter (Brantner, 1964), school type (Abel& Sewell, 1999; Farber, 1984; Rottier, Kelly, & Tomhave, 1983), education level (Brantner, 1964), this found that, whether one is female or male, novice or experienced in teaching, has a Master's degree or not, works in regular primary school or any other type of school, teaches Mathematics or Science and Technology or any other subject, was graduated from either faculty of education or

not, has tenured job or not did not indicate any significant difference in teachers' in-service training needs and in-service training program preferences. These results are interesting due to the existing literature. Furthermore, considering the differences of teachers' characteristics, it is difficult to explain these results. To illustrate, there was only one significant need with respect to teachers' faculty graduated. This means that there was not a difference on the needs of teachers graduated from both faculties of education and other types of faculties. Although there are huge differences on the programs of faculty of education and other faculties, teachers reported similar needs. It should be questioned that whether pedagogical formation programs are good enough to close the gap arisen from this program differences in a short time or the pre-service teacher education programs are not qualified enough to make difference on their graduates. If the former is answered as yes, and if it is enough to take formation courses to be a teacher like others graduated from faculties of education, then why that much money and effort is devoted to faculties of education? On the other side, if this is the case, it is good news, pedagogical formation programs given in a very short time is able to educate teachers at least the teachers who graduated from faculty of education. There may be done this kind of discussions about the other results of this study, which will arise new research questions for future researchers.

As a type of predictor of preferred professional development program, teachers' opinions on the quality and appropriateness of previous in-service training programs were examined. Consistent with the existing literature recording the most commonly cited result of studies was the enhancement in teachers' content and pedagogical knowledge (Guskey, 2003), and in-service training programs in the literature were moderately effective (Wade, 1985), the findings of the present study indicated moderate satisfaction by teachers. In general, the results showed that participants mostly rated given positive items as either "valid for most of in-service training programs" or "valid for half of in-service training programs." It can be concluded that teachers were satisfied with the "Participants" in the most of previous in-service training programs, "Contents," "Instructors," "Organization," "Training Centers," and "Evaluation" in half of previous in-service training programs. Teachers reported that only few training programs, some necessities like

notebook, pen, and computer met under "Organization" category, and they reported that for none of the previous programs, food and refreshments offered during the courses were enough under "Training Centers" category. As another contribution to the literature, this study aimed to get information about previous in-service training programs from the teachers who have attended programs not voluntarily. According to the literature, much of the research on in-service teacher education has focused on the relationship between features of in-service training programs and their outcomes for teachers who participated voluntarily -volunteers who were highly motivated to learn or change (Supovitz & Zeif, 2000), Theis (1981) reported in his review that most of the researchers found that teachers were volunteers for in-service training if their needs were addressed, and thus, the outcomes of studies of professional development programs that are mandatory for teachers were unclear (Bobrowsky, Marx, & Fishman, 2001). Therefore, this study may be taken as an initial step for collecting information on in-service training programs that are mandatory for teachers.

Finally, in this study the researcher attempted to model teacher reports of their in-service training needs. The variables in the hypothesized model were determined based on the literature review. Although the variables in the model had statistically significant relationships with teacher needs with medium to large effects, in this study they did not show any significant relationship. This result could be explained by taking account of country specific circumstances. In our study, Turkish teachers have to attend in-service training programs whether or not their needs are taken into account. Furthermore, they are not supported or motivated with some kind of incentives rather than personal satisfaction. On the other hand, some of the in-service training programs are implemented in the cities that very far from the country center and some of the training centers are not located in convenient districts. Therefore, to develop their skills and support their existing knowledge, teachers have to attend compulsory courses in inconvenient places, without being compensated with any incentives.

5.2 Implications for Practice

In the present study, in-service training programs that were preferred and needed by lower and upper primary school teachers were modeled. Furthermore, determinants of in-service training needs were assessed across categorical variables, and evaluation of previous in-service training programs.

This study aimed to present evidence regarding the effects of teachers' demographic characteristics on in-service training needs. However, based on the teachers' responses, it can be concluded that most of the variables had small or very small effects on needs categories. Despite their small effects on teachers' in-service training needs, while designing an in-service training program, taking teacher characteristics into account is still important to respond to teacher needs and to consider individual differences. To illustrate, Classroom, Mathematics, Science and Technology, and Social Sciences teachers reported need for training of *Self-Development* when compared with English teachers; teachers with 16 or more years teaching experience reported a higher need for training on *Technology Use in Teaching* than did the other more junior groups; teachers who are graduated from a faculty of education reported need for *Self-Development* when compared with the teachers who are graduated from other faculties; teachers with pre-undergraduate education level need for training on *Technology Use in Teaching* when compared with the teachers with undergraduate and graduate education level. It is strongly suggested that Ministry of National Education should consider these individual differences while designing in-service training programs so that the programs will achieve their major purposes. Furthermore, reaching the target group with regarding these individual differences will help Ministry of National Education in using resources effectively. On the other hand, this method will save time for other teachers who do not need a planned in-service training program, and prevent unnecessary participation for those teachers who already know that content.

This study also aimed to find evidence regarding the effects of teachers' demographic characteristics on in-service training preferences. Nevertheless, based on the teachers' reports, it can be concluded that most of the variables had medium, small or very small effects on in-service training preferences. In spite of their small effects on teachers' in-service training preferences, while designing an in-service training program, taking teacher characteristics into account is still important to respond to teachers' needs. To illustrate, female teachers reported preferences for *required materials and sources be announced before course starts* when compared with male teachers; English teachers reported preference for *content that is determined after analysis of teacher needs* and that *required materials and sources be announced before course starts* when compared to Science and Technology teachers; teachers with 6-10 years, 11-15 years, and 16 or more years teaching experience reported preference for *courses that are given before school finishes (June seminar term),* and *courses that are given before school starts (September seminar term)* when compared to teachers with 0-5 years teaching experience; teachers graduated from faculty of education reported preference for *content is lectured by instructors than supported by activities* when compared to teachers graduated from other faculties; teachers with undergraduate and graduate education level reported preference for *content is determined after analysis of teacher needs,* and *instructors are academicians* when compared to teachers with pre-undergraduate education level; teachers who work at regular primary schools reported preference *courses that are given before school starts (September seminar term)* when compared to teachers working at other type of primary schools; teachers who have tenured position at their work reported preference for *participants who are all teachers, participants who are all from the same subject area,* and *participants who are all participate with voluntarily* when compared to teachers who have not tenured position at their works.

Consideration of these individual differences while designing an in-service training program may help Ministry of National Education in reaching their major purposes. Hence, reaching the target groups of professional development programs may make Ministry of National Education to use the resources in a more effective

way. Furthermore, this study also showed that one size not always fit all. Therefore, while designing professional development programs this principle should not be forgotten.

The results of the present study also indicated that teachers generally do not want to attend in-service training programs, they did not report virtually any need for most of the 52 training content choices. On the other hand, teachers rated half of the previous in-service training programs that they attended as satisfactory. Although teachers were mostly satisfied with components of previous in-service training programs, they were not willing to rate their in-service training needs. This conclusion should be taken into consideration by Ministry of National Education. Most of the in-service training programs offered by Ministry of National Education are compulsory courses and seminars. If those courses and seminars do not have many problems with their design and implementation, the reason for teachers not reporting any need for in-service training should be questioned. The authorities in the field of teacher training should further examine to reveal the results 1) whether the teachers are really good at in those specified contents so that they do not need any additional knowledge or skills; or 2) the in-service training programs are not attractive to teachers' interests. If it is found that the reason is not attractiveness of in-service training programs, Ministry of National Education needs to develop methods to solve this problem. Different type of professional development programs from other developed countries can be examined and taken into consideration as a model so that teachers are interested in attending in-service training courses and seminars. Clement and Vandenberghe (2000) also imply that "the incentives, challenges, support and feedback occurring in teachers' work context, giving them the opportunity to gain new competences" (p. 86). Furthermore, Guskey (1986) also supports that one of the reasons of the failure of in-service training programs is not paying attention to factors that motivate teachers to participate in professional development. Theis (1981) found in his review that salary increase was a universal motivation for teachers regarding in-service training. Therefore, offering incentives like increase in salary, in-service training programs' being imperative for recruitment, preferment, etc. may help to

solve this problem. Moreover, the findings of the study suggested that participants strongly preferred to attend the courses voluntarily. This result should be seriously taken into consideration by Ministry of National Education. If teachers will be able to attend in-service training programs voluntarily then both sides may benefit from the situation; that is, teachers may get in-service training on what they need and are interested in, and the Ministry of National Education may have more qualified and skilled teachers by providing opportunities to them to gain more from those programs. In addition, teachers preferred academicians as instructors in the trainings. To respond this need, universities and Ministry of National Education should jointly design in-service training programs.

What do these results actually mean? These research-based evidences show a path for effective teachers' professional development design to related audiences. Professional designers may use this empirical knowledge before taking the later steps of professional development design. Knowing what teachers need and prefer, will ensure a stronger and effective design of a new in-service training programs.

From more general perspective, getting together all the results of this study; there are some implications for policy come out;

MoNE proposed teacher competencies and allocated a small room for teachers' professional development. Among 31 sub-competencies, only one of them was related with teachers' professional development, and according to these performance indicators stated by MoNE (2012) in a "Teachers' general competencies" booklet teachers are aware of their professional needs, participate in-service training programs (A6.1), meetings and seminars to improve their professional knowledge and skills (A6.3), to improve teaching-learning process carry out action research (A6.5). Unfortunately, these efforts are promising but not enough to establish a professional development policy. The Ministry of National Education has a big role on the quality of professional development of teachers. First of all, the professional development policy should be based on certain standards to improve the quality and results of professional development since

standards guide the design, implement, and evaluation of professional development programs. Hence, MoNE is expected to develop these standards with the collaboration of faculties of education, and prosecute their continuity. These standards should be based on teacher and student characteristics, school, and district needs, and societal expectations. Based on the literature, these standards must encourage professional development designers move away from fragmented, vender-driven, sit 'n' get, and one-shot workshops, and must move toward more supporting, sustained, job-embedded, coherent, and intentionally designed opportunities. In addition, MoNE should consider learning theories such as adult learning theory, which proposes that learners have a right to select their choices from different alternatives and decide their own learning pace, sequence of the activities, mode of instruction and assess their own learning (Driscoll, 1998).

Furthermore, MoNE is also expected to monitor and support district plans. Since each district has its own needs in its own context, MoNE is expected to provide fund and guidance for district professional development plans. To have more coherent professional development, MoNE needs to have review criteria for district and local plans. In addition, to control over effective use of funds, MoNE needs to have some certain evaluation criteria. Whether professional development outputs are long-lasting or not should also be evaluated. Since ongoing professional development requires multiple opportunities of feedback, MoNE, district or local directors, and teacher educators need to design multiple methods of evaluation and feedback mechanism to monitor professional learning.

The last but the most important, MoNE is expected to develop, pilot, and disseminate research-based professional development models to assist districts and local directors to implement better, more coherent professional development so that districts and local directors do not have to reinvent professional development designs themselves. No matter what course MoNE chooses to present, the time to begin engaging stakeholders in conversations about the needs, and expectations of new age, society, teachers, and students is now.

5.3 Implications for Further Research

This study surveyed lower and upper primary school teachers from the subject areas of classroom teaching, Mathematics, Science and Technology, English, Turkish, and Social Sciences. The responses gathered from 1730 teachers generated several recommendations for future in-service training programs. Since the simple random sampling methods increase the likelihood of representativeness of population (Fraenkel & Wallen, 2005), the results of this study is generalized to whole population. Therefore, the present study provides a basis for further "Professional Development" studies with a wider variety of participants. The results of the study support the following recommendations for future research:

First, one of the purposes of current study is to develop a scale assessing teachers' self-reported in-service training needs and preferences. Findings indicated that In-Service Teacher Training scale is a promising tool with its satisfactory validity and reliability scores. However, the data collection instrument used in this study was developed based on preliminary interviews with teachers, district administrators, and experts, as well as on published literature. Therefore, the framework of this instrument reflects Turkish culture and is specific to the Turkish context. The researchers who will design similar studies need to consider this situation while examining the present data collection instrument. Moreover, in an effort to improve the current scale, in addition to experts', district administrators', and teachers' opinions, school administrators' opinions can be included about measurement and evaluation practices. In addition, further validation studies are required with different populations. To update and improve the existing structure of questionnaire, current educational changes and policy initiatives should be examined, and some items should be added. To illustrate, Ministry of National Education launches FATIH project (Movement to Increase Opportunities and Technology) -Turkey's ambition of creating high-tech education system- as one of the recent attempts in public education. Owing to the initiatives of this project, MoNE is planning to turned classrooms into smart classes, and distributed every student a tablet PCs (MoNE, 2012). It is strongly recommended to future

researchers to ask teachers about their needs on how to use smart classrooms, tablet PCs, e-books, how to provide content in this technological environment, and how to manage a technological lesson, and so on.

Second, it is recommended to other researchers to conduct nation-wide "Professional Development" studies with high school teachers. Researchers may identify different in-service training needs and preferences for teachers from different types of high schools (Anatolian high schools, Vocational and Technical high schools, Science and Mathematics high schools, Social Studies high schools, fine Arts high schools, etc.). Furthermore, considering that school administrators also have duties as teachers in their schools, and they may have different needs and preferences for in-service training programs, their needs and preferences should be examined separately. Note that the data were not collected from private school teachers due to the same restrictions. Further studies should investigate whether there is a difference between private and public school teachers in terms of their in-service training needs and preferences. The results to be collected from all these participants will shed light on establishing and practicing a stronger "Professional Development" policy in Turkish Education system.

Third, the present study was exploratory in nature. Hence, the "Why?"question was not addressed in this study. To understand deeply why teachers did not rate any need among such a wide range of in-service training content, qualitative research methods should be employed in future research. Via one by one interviews, teachers may give further and more specific information about this situation. Focus group interviews may also help to get rich information about the main reasons underlying the results of this study. The findings to be gathered from the qualitative study can provide in-depth insight into teachers' responses about their low rating of in-service training needs. Furthermore, to determine whether teachers really do not need any additional knowledge and skill, a section to get information from teachers about their self-perception of knowledge and skills can be used to compare their ratings of needs with self-perception of their developmental areas. In this sense, further research needs to shed light on what

teachers need to take and what teachers want to take as an in-service training. The results of this study will provide better understanding on the content, forms and audiences of future in-service teacher training designs. Furthermore, to be able bring precious explanation whether teachers want or need the specified training contents, designing a qualitative research is imperative.

As known, Tyler (1949) also uses learners as a "source" for the program development. This study had an attempt to analyze learner needs and preferences as an initial strategy of a design process. It is suggested for future researchers to get further information about teachers' background, pre-entry characteristics, and existing knowledge to make this initial step of designing a program more comprehensive before deciding on the other steps of professional development program. Moreover, to design a more representative professional development program, it is also recommended for future designers to analyze other sources besides learners like subject matter and society.

Finally, to determine who needs particular in-service training programs, variables in addition to gender, subject area, teaching experience, education level, faculty graduated, school type, and employment type, number of students in classrooms or schools and residential area should be examined. School size and residential area can be considered among the mostly cited variables in the literature. To illustrate, Akar (2010) found that the challenges that teachers confronted with at their schools are related to school characteristics such as; large class sizes, insufficient number of classrooms, and related to some intercultural challenges such as; differences among students based on culture, socio-economic background, and age, poor language skills. Hence, it is obvious to conclude that teachers who work in different residential areas with large class and school sizes have different needs. Differentiating the needs of teachers who work in rural schools and are confront with large class and school sizes is essential to design in-service training programs in accordance with the teachers' realities. To ensure the better understanding about the teachers in-service needs and preferences, and to design more representative programs for all teachers, it is important to collect empirical evidences about rural

and urban school teachers' different challenges and needs. Due to the research evidences, it will be possible to discuss on the issue of decentralization of professional development programs to make in-service training of teachers more manageable and meaningful for the teachers. Unfortunately, in this study, the effects of second-level variables like school size and residential area on teacher needs and preferences were not explored; hence, multi-level modeling was not employed since it was not possible to gather the data from same school and regions separately in the data collection process owing to the restrictions of EARGED rules and regulations. Therefore, using these kinds of variables in this study would violate the assumption of independence of observation leading to Type I error rates larger than .05 since the teachers from the same school may have similar scores. It is strongly recommended to collect data by gathering more information about second-level variables so as not to violate assumption and prevent false positives, and include them in multilevel modeling to explore their relationships with teachers' in-service training needs in future designs.

REFERENCES

Abel, M. H., & Swell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *The Journal of Educational Research, 92*(5), 287-293.

Abdal-Haqq, I. (1995). *Making time for teacher professional development* (Digest 95-4). Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.

Akar, H. (2010). Challenges for schools in communities with internal migration flows: Evidence from Turkey. *International Journal of Educational Development, 30,* 263-276.

Aksit, N. (2007). Educational reform in Turkey. *International Journal of Educational Development 27*, 129-137.

Aksit, N. & Sands, M. (2006). Issues and challenges facing education in Turkey. In J. Earnest & D. Treagust (Eds.). *Education reform in societies in transition international perspectives* (pp. 13-28). Netherlands: Sense Publishers.

Aksu, M., Demir, C. E., Daloglu, A., Yildirim, S., & Kiraz, E. (2010). Who are the future teachers in Turkey? Characteristics of entering student teachers. *International Journal of Educational Development, 30*, 91-101.

Akyüz, Y. (2006). *Türk eğitim tarihi: M.Ö. 1000-M.S. 2006.* Ankara: PegemA Yayıncılık.

Aleamoni, L. M., & Hexner, P. Z. (1980). A review of the research on student evaluation and a report on the effect of different sets of instructions on student course and instructor evaluation. *Instructional Science, 9*(1), 67-84.

Altan, M. Z. (1998). A call for change and pedagogy: A critical analysis of teacher education in Turkey. *European Journal of Education, 33*(4), 407-417.

Altun, A., & Gok, B. (2010). Determining in-service training programs' characteristics given to teachers by conjoint analysis. *Procedia Social and Behavioral Sciences, 2,* 1709-1714.

Angrist, J. D., & Lavy, V. (2001). Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem Public Schools. *Journal of Labor Economics, 19*(2), 343-369.

Anılan, H. & Sarıer, Y. (2008). Altıncı sınıf matematik öğretmenlerinin matematik dersi öğretim programinin uygulanabilirliğine ilişkin görüşleri. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, 8*(16), 128-141.

Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education, 27,* 10-20.

Bal, P. (2008). Yeni ilköğretim matematik öğretim programının öğretmen görüşleri açısından değerlendirilmesi. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 17*(1), 53-68.

Ball, D. L. (1996). Teacher learning and the mathematics reforms: What do we think we know and what do we need to learn? *Phi Delta Kappan, 77,* 500-508.

Ball, D. L., & Cohen, D. K. (1996). Reform by the book What is -or might be- the role of curriculum materials in teacher learning and instructional reform? *Educational Researcher, 25*(9), 6-8.

Ball, D., & Cohen, D. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In G. Sykes & L. Darling-Hammond (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 3-32). San Francisco: Jossey-Bass.

Baran, B. & Çağıltay, K. (2006). Teachers experiences in OPD environment. *Turkish Online Journal of Distance Education, 7*(4), 110-122.

Barnett, M. (2002). *Issues and trends concerning electronic networking technologies for teacher professional development: A critical review of the literature.* Paper presented at the American Educational Research Association, New Orleans, LA.

Beane, J. A., Toepfer, C. F., & Alessi, S. J. (1986). *Curriculum planning and development.* Boston: Allyn and Bacon.

Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin, 107*, 238-246.

Bentler, P. M. (1995). *EQS structural equations program manual.* Encino, CA: Multivariate Software.

Berg, R. Van den, Sleegers, P., Geijsel, F., & Vandenberghe, R. (2000). Implementation of an innovation: Meeting the concerns of teachers. *Studies in Educational Evaluation, 26,* 331-350.

Berliner, D. C. (1984). Making the right changes in preservice teacher education. *Phi Delta Kappan, 66,* 94-96.

Bikmaz, F. H. (2006). New elementary curricula and teachers. *Ankara University Journal of Faculty of Educational Sciences, 36*(1), 97-116.

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

Bobrowsky, W., Marx, R., & Fishman, B. (2001, March). *The empirical base for professional development in science education: Moving beyond volunteers.* Paper presented at the annual meeting of the National Association of Research on Science Teaching, St. Louis, MO.

Bollen, K. A. (1989). *Structural equations with latent variables.* New York: Wiley.

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

Borko, H., Elliot, R., & Uchiyama, K. (2002). Professional development: A key to Kentucky's educational reform effort. *Teaching and Teacher Education, 18*(8), 969-987.

Brantner, S. T. (1964). *Trade and technical teacher's opinions on inservice education.* (ERIC Document Reproduction Service No. ED 016 044).

Brophy, J. E. (1979). Teacher behavior and student learning. *Educational Leadership, 37,* 33-38.

Brophy, J., & Good, T. L. (1986). *Teacher behaviour and student achievement*. In M.C. Wittrock (Ed.), Handbook of research on teaching. New York: MacMillan.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.

Buchberger, F., Campos, B. P., Kallos, D., & Stephenson, J. (2000). *Green Paper on Teacher Education in Europe.* Sweden: Thematic Network on Teacher Education in Europe.

Bulut, S., Demircioğlu, H., & Yıldırım, A. (1995). *Ortaokul ve liselerde fen ve matematik öğretimi: Sorunlar ve öneriler* [Science and math education in middle and high schools: problems and suggestions]. Paper presented at the Second National Science Education Symposium, Middle East Technical University, Ankara, Turkey.

Byrne, B. M. (2001). *Structural equation modeling: Basic concepts, applications, and programming.* Lawrence Erlbaum Associates, Inc.

Cakiroglu, E., & Cakiroglu, J. (2003). Reflections on teacher education in Turkey. *European Journal of Teacher Education, 26*(2), 253-264.

Cherubini, G., Zambelli, F., & Boscolo, P. (2002). Student motivation: an experience of inservice education as a context for professional development of teachers. *Teaching and Teacher Education, 18*(3), 273-288.

Clarke, V. (1990). Girls and computing: dispelling myths and finding directions. In: A. McDougall & C. Dowling (Eds.), *Computers in Education. Amsterdam*: North-Holland/Elsevier.

Clement, M., & Vandenberghe, R. (2000). Teachers' professional development: A solitary or collegial (ad)venture? *Teaching and Teacher Education, 16,* 81-101.

Cochrane-Smith, M. (2001). The outcomes question in teacher education. *Teaching and Teacher Education, 17*(5), 527-546.

Cochran-Smith, M. (2004). The problem of teacher education. *Journal of Teacher Education, 55*(4), 295-299.

Cohen, D. K., & Hill, H. C. (1998). *Instructional policy and classroom performance: The mathematics reform in California (RR-39)*. Philadelphia: Consortium for Policy Research and Education.

Cohen, D. K., Raudenbush, S. W., & Ball, D. L. (2003). Resources, instruction, and research. *Educational Evaluation and Policy Analysis, 25,* 119-142.

Coolahan, J. (2002). Teacher education and the teaching career in an era of lifelong learning. *OECD Education Working Papers, 2,* 1-39.

Crawford, C. (2004). Non-linear instructional design model: Eternal, synergistic design and development. *British Journal of Educational Technology, 35*(4), 413-420.

Cruickshank, D. R. (1996). *Preparing America's teachers*. Bloomington: Phi Delta Kappa Educational Foundation.

Cruicshank, D. R., Bainer, D. L., & Metcalf, K. K. (1995). *The act of teaching*. USA: McGraw-Hill, Inc.

Cruz, M. J., & Arias, P. F. C. (2007). Comparative analysis of expectancies of efficacy in inservice and prospective teachers. *Teaching and Teacher Education, 23,* 641-652.

Çatmalı, M. (2006). *"Gelecek için eğitim" hizmetiçi eğitim kursunun değerlendirilmesi.* [Evaluation of inservice education program "teach to the future"]. (Unpublished master's thesis). Balıkesir University, Balıkesir, Turkey.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*, *57*(3), 300-314.

Darling-Hammond, L., & Ball, D. L. (1999). What can policymakers do to support teaching to high standards? *CPRE Policy Bulletin.* New Brunswick, NJ: Center for Policy Research in Education.

Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*(8), 597-604.

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.

Desimone, L. M., Garet, M. S., Birman, B. F., Porter, A. C., & Yoon, K. S. (2003). Improving teachers' in-service professional development in mathematics and science: The role of postsecondary institutions. *Educational Policy, 17,* 613-649.

Desmarais, J. (1992). *Teachers' opinions of the characteristics of good inservice programs as suggested in current research.* (ERIC Document Reproduction Service No. ED 354 592).

Dewey, J. (1939). *Türkiye maarifi hakkında rapor.* İstanbul: Maarif Basımevi.

Dick, W., & Cary, L. (1990). *The systematic design of instruction.* New York: Harper Collins.

Doll, R. C. (1996). *Curriculum improvement: Decision making.* Boston: Allyn and Bacon.

Driscoll, M. (1998). *Web-based training: Using technology to design adult learning experiences.* San Francisco: Jossey- Bass.

Ekşi, İ. (2001). *Okul müdürlerinin hizmetiçi eğitim ihtiyacı.*(Unpublished master's thesis). Kocaeli University, Kocaeli, Turkey.

Erişen, Y. (1997). *Atelye ve meslek dersleri öğretmenlerinin öğretmenlik formasyonu açısından hizmetiçi eğitim ihtiyaçlarının belirlenmesi.* (Unpublished master's thesis). Ankara University, Ankara, Turkey.

European Union. (2007). *EU on teacher education.* Retrieved from http://www.eaea.org/news.php?aid=13883&hakustr=teacher%20education#a_13883

Eylon, B., & Bagno, E. (1997). Professional development of physics teachers through longterm in-service program: The Israel experience. In E. F. Redish & J. S. Rigden (Eds.), *The changing role of physics departments in modern universities: Proceeding of ICUPE, The American Institute of Physics,* 299-326.

Farber, B. A. (1984). Stress and burnout in suburban teachers. *The Journal of Educational Research, 77*, 325-331.

Featherstone, H. (1993). Learning from the first years of classroom teaching: The journey in, the journey out. *Teachers College Record, 95*(1), 93-112.

Field. A. (2005). *Discovering statistics using SPSS.* Newbury Park. CA: Sage.

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*(6), 643-658.

Fok, S., Chan, K., Sin, K., Hg, A. H., & Yeung, A. S. (2005). *In-service teacher training needs in Hong Kong.* Paper presented at The Annual Conference of the Australian Association for Research in Education, Sydney, Australia.

Fraenkel, J.R., & Wallen, N.E. (2005). *How to design and evaluate research in education*. New York: McGraw-Hill Companies.

Frey, N., & Fisher, D. (2009). Using common formative assessments as a source of professional development in an urban American elementary school. *Teaching and Teacher Education, 25*(5), 674-680.

Friedlander, N. B., Dreyfus, A., & Milgrom, Z. (2004). Types of ‘‘teachers in training’’: The reactions of primary school science teachers when confronted with the task of implementing an innovation. *Teaching and Teacher Education, 20,* 607-619.

Fullan, M. (1982). *The meaning of educational change.* New York: Teachers College Press.

Fullan, M. (1991). *The new meaning of educational change.* USA: Teacher College Press.

Fullan, M. G. (1993). *Change forces: Probing the depths of educational reform.* Bristol: PA, Falmer Press.

Fullan, M. (1995). The limits and the potential of professional development. In T. R. Guskey, & M. Huberman (Eds.), *Professional development in education: New paradigms and practices* (pp. 253-268). New York: Teachers College Press.

Fullan, M. G., & Miles, M. B. (1992). Getting reform right: What works and what doesn't. *Phi Delta Kappan, 73*(10), 745-752.

Gage, N. L. (1984). What do we know about teaching effectiveness? *Phi Delta Kappan, 66,* 87-93.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38*(4), 915-945.

Garton, B. L., & Chang, N. (1997). An assessment of the inservice needs of beginning teachers of agriculture using two assessment models. *Journal of Agricultural Education, 38*(3), 51-58.

Gediklioglu, T. (2005). Turkish education system in the process of European Community: Problems and solutions. *Mersin University Journal of the Faculty of Education, 1*(1), 66-80.

Gelman, A., & Stern, H. (2006). The difference between "Significant" and "Not significant" is not itself statistically significant. *The American Statistician, 60*(4), 328-331.

Glathorn, A. A., Jones, B. K., & Bullock, A. A. (2006). *Developing highly qualified teachers: A handbook for school leaders.* California, Corwin Press.

Gokce, A. T. (2010). Alternatively certified elementary school teachers in Turkey. *Procedia Social and Behavioral Sciences, 2,* 1064-1074.

Griffin, G. (1987). Foreword. In G. S. Griffin & S. Millies (Eds.), *The first years of teaching.* Chicago: University of Illinois, Chicago.

Grossman, G. M., Onkol, P. E., & Sands, M. (2007). Curriculum reform in Turkish teacher education: Attitudes of teacher educators towards change in an EU candidate nation. *International Journal of Educational Development, 27,* 138-150.

Grossman, G. M.,& Sands, M. K. (2008). Restructuring reforms in Turkish teacher education: Modernization and development in a dynamic environment. *International Journal of Educational Development, 28,* 70-80.

Gursimsek, I., Kaptan, F., & Erkan, S. (1997). *General view of teacher educational policies of Turkey.* Paper presented at the 49th AACTE Annual Meeting, Phoenix, Arizona, USA.

Guskey, T. R. (1985). The effects of staff development on teachers' perceptions about effective teaching. *The Journal of Educational Research, 78*(6),378-381.

Guskey, T. R. (1986). Staff development and the process of teacher change. *Educational Researcher, 15*(5)*,* 5-12.

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

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice, 8*(3/4), 381-391.

Guskey, T. R. (2003). What makes professional development effective? *The Phi Delta Kappan,84*(10), 748-750.

Guven, I. (2007). Recent initiatives in school effectiveness and improvement: The case of Turkey. In T. Townsend (Ed.), *International handbook of school effectiveness and improvement*. (pp. 363-378). New York: Springer.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2006). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Hargreaves, A. (2000). *Changing teachers, changing times: Teachers' work and culture in the postmodern age.* London: Continuum.

Harris, B. M., Bessent, W.,& McIntyre, K. E. (1969). *Inservice education: A guide to better practice.* New Jersey: Prentice Hall, Inc.

Heinich, R., Molenda, M., Russell, J., & Smaldino, S. (1999). *Instructional media and technologies for learning.* Englewood Cliffs, NJ: Prentice-Hall.

Henderson, E. S. (1978). *The evaluation of in-service teacher training.* London: Croom Helm.

Henson, R. K. (2006). Effect-size measures and meta-analytic thinking in counseling psychology research. *The Counseling Psychologist, 34,* 601-629.

Hite, H., & Howey, K. R. (1977). *Planning in-service teacher education: Promising alternatives.* Washington, D.C: American association of colleges for teacher education. (ERIC Document Reproduction Service No. ED 137 229).

Hofman, R. H., & Dijkstra, B. J. (2010). Effective teacher professionalization in networks? *Teaching and Teacher Education, 26*(4), 1031-1040.

Houston, W. R., Marshall, F., & McDavid, T. (1993). Problems of traditionally prepared and alternatively certified first-year teachers. *Education and Urban Society, 26*(1), 3-34.

Hoyle, R. H. (1995). *Structural equation modeling: Concepts, issues, and applications.* Thousand Oaks, CA: Sage.

Hu, L.-T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*, 424-453.

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1-55.

Huberman, M. (1995) Professional careers and professional development: Some intersections. In: T. R. Guskey & M. Huberman (Eds.), *Professional development in education: New paradigms and practices* (pp. 193-224). New York: Teachers College Press.

Hursen, C. (2012). Determine the attitudes of teachers towards professional development activities. *Procedia Technology, 1,* 420-425.

In-Service Training Department (2011). *In-service Training in MoNE.* Retrieved from http://hedb.meb.gov.tr/net/

İpek, C., & Ucar, R. (2006). İlköğretim okullarında görev yapan yönetici ve öğretmenlerin MEB hizmet içi eğitim uygulamalarına ilişkin görüşleri. *Yüzüncü Yıl Üniversitesi Elektronik Eğitim Fakültesi Dergisi, 3*(1), 1-20.

Jager, B., Reezigt, G. J., & Creemers, B. P. M. (2002). The effects of teacher training on new instructional behaviour in reading comprehension. *Teaching and Teacher Education, 18*, 831-842.

Jarvis, S., & Algozzine, B. (2006). *Everything I need to know about teaching: They forgot to tell me!* California, Corwin Press: Thousands Oaks.

Johnson, S. M., & Kardos, S. (2002). Keeping new teachers in mind. *Educational Leadership, 59*(6), 13-16.

Joyce, B., & Showers, B. (1980). Improving inservice training: The messages of research. *Educational Leadership, 37*(5), 379-385.

Karagiorgi, Y., & Symeou, L. (2007). Teachers' in-service training needs in Cyprus. *European Journal of Teacher Education, 30*(2), 175-194.

Kealey, K. A., Peterson, A. V., Gaul, M. A., & Dinh, K. T. (2000). Teacher training as a behavior change process: Principles and results from a longitudinal study. *Health Education and Behavior, 27*(1), 64-81.

Kelchtermans, G., & Vandenberghe, R. (1994). Teachers' professional development: A biographical perspective. *Journal of Curriculum Studies, 26*(1), 45-62.

Kline, R. B. (2004). *Principles and practice of structural equation modeling.* (2nd ed.). New York : Guilford Press.

Kwakman, K. (2003). Factors affecting teacher participation in professional learning activities. *Teaching and Teacher Education, 19*(2), 149-170.

Learning Forward. (2011). *Standards for professional learning.* Oxford, OH: Author. Retrieved from www.learningforward.org/standards/index.cfm

Lieberman, A. (1996). Practices that support teacher development: Transforming conceptions of professional learning. In M. W. McLaughlin & I. Oberman (Eds.), *Teacher learning: New policies, new practices* (pp.185-201). New York: Teachers College Press.

Lindgren, U. (2005). Experiences of beginning teachers in a school-based mentoring program in Sweden. *Educational Studies, 31*(3), 251-263.

Linn, G. B., Gill, P. Sherman, R., Vaughn, V., & Mixon, J. (2010). Evaluating the long-term impact of professional development. *Professional Development in Education, 36*(4), 679-682.

Little, J. W. (1988). Seductive images and organizational realities in professional development. In A. Lieberman (Ed.), *Rethinking school improvement.* New York: Teachers College Press.

Lock, J. V. (2006). A new image: Online communities to facilitate teacher professional development. *Journal of Technology and Teacher Education, 14*(4), 663-678.

Loucks-Horsley, S., & Matsumoto, C. (1999). Research on professional development for teachers of mathematics and science: The state of the scene. *School Science and Mathematics, 99*(5), 258-271.

Loucks-Horsley, S., Hewson, P. W., Love, N., & Stiles, K. E. (1998). *Designing professional development for teachers of science and mathematics.* Thousand Oaks, CA: Corwin Press.

Lovett, M. W., Lacerenza, L., de Palma, M., Benson, N. J., Steinbach, K. A., & Frijters, J. C. (2008). Preparing teachers to remediate reading disabilities in high school: What is needed for effective professional development? *Teaching and Teacher Education, 24*(4), 1083-1097.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1,* 130-149.

MacDonald Grive, A., & McGinley, B. P. (2010). Enhancing professionalism? Teachers' voices on continuing professional development in Scotland. *Teaching Education, 21*(2), 171-184.

Margerum-Leys, J., & Marx, R. W. (2002). Teacher knowledge of educational technology: A case study of student/mentor teacher pairs. *Journal of Educational Computing Research, 26*(4), 427-462.

Marsh, H. W., Hau, K.-T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling, 11*, 320-341.

McCallum, L. W. (1984). A meta-analysis of course evaluation data and its use in the tenure decision. *Research in Higher Education, 21*(2), 150-158.

McIntyre, E., & Kyle, D. W. (2006). The success and failure of one mandated reform for young children. *Teaching and Teacher Education, 22*(8), 1130-1144.

Milli Eğitim Bakanlığı. (1994). Milli Eğitim Bakanlığı hizmetiçi eğitim yönetmeliği [In-service Training Regulation of the Ministry of National Education]. *MEB Tebliğler Dergisi, 2417*, 765-773.

Milli Eğitim Bakanlığı Strateji Geliştirme Başkanlığı (2011). *Milli Eğitim Bakanlığı istatistikleri örgün eğitim 2010-2011.* Ankara: Yayımlar Dairesi.

Milli Eğitim Bakanlığı. (2012). Fatih Projesi Bileşenleri. Retrieved from http://fatihprojesi.meb.gov.tr/tr/icerikincele.php?id=14

Milli Eğitim Bakanlığı. (2012). *Milli Eğitim Bakanlığında Mesleki Gelişim* [Professioanl Development in Ministry of National Education]. Retrieved from http://oyegm.meb.gov.tr/www/tanitim/icerik/7

Milli Eğitim Bakanlığı. (2012). *Öğretmenlik Mesleği Genel Yeterlilikleri.* Retrieved from http://otmg.meb.gov.tr/YetGenel.html

Morrison, G. R. Ross, S. M., & Kemp, J. E. (2004). *Designing effective instruction.* USA: John Wiley & Sons, Inc.

Moyer, P. S., & Husman, J. (2000). The development of autonomy orientations as part of teacher development: What's experience got to do with it? *Journal of Research and Development in Education, 34*, 40-48.

Moyles J., & Robinson, G. (2002). *Beginning teaching, beginning learning in primary education*. USA: Oxford University Press.

Nias, J. (1989). *Primary teachers talking: A study of teaching as work.* London: Routledge.

No Child Left Behind Act of 2001, Pub. L. No. 107–110, 9101, 34.

OECD (1998). *Education policy analysis.* Paris.

OECD (1998). *Keeping ahead: Inservice training and teacher professional development.* Paris.

OECD (2010). *Overview of country results in TALIS: Turkey.* Retrieved from http://www.oecd.org/dataoecd/8/23/43072807.pdf

Ornstein, A. C., & Hunkins, F. P. (2004). *Curriculum: Foundations, principles, and issues*. Boston: Allyn and Bacon.

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.

Oztaskin, O. B. (2010). Identifying the in-service training needs of the social studies teachers within the context of lifelong learning. *Procedia Social and Behavioral Sciences, 2,* 3036-3042.

Ozturk, M. (2008). *Induction into teaching: Adaptation challenges of novice teachers.* (Unpublished master's thesis). Middle East Technical University, Ankara, Turkey.

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

Posner, G. J., & Rudnitsky, A. N. (2006). *Course design: A guide to curriculum development for teachers*. New York: Pearson.

Purdon, A. (1999). The professional development of teachers. In T.G.K Bryce & W.M. Humes (Eds.), *Scottish education* (pp. 942-952). Edinburgh: Edinburgh University Press.

Randi, J., & Zeichner, K. M. (2004). New visions of teacher professional development. In M. A. Smylie & D. Miretzky (Eds.), *Developing the teacher workforce: 103rd yearbook of the national society for the study of education* (pp. 108-227). Chicago: University of Chicago Press.

Reigeluth, C. M. (1983). *Instructional design theories and models: An overview of their current status.* Philadelphia: Lawrence Erlbaum Associates.

Reiser, R. A. (2007). A history of instructional design and technology. In Reiser, R. A. & Dempsey, J. V. *Trends and issues in instructional design and technology,* (2nd ed.). Merrill Prentice Hall.

Remillard, J. T. (2005). Examining key concepts in research on teachers' use of mathematics curricula. *Review of Educational Research, 75*(2), 211-246.

Rosenshine, B. (1986). Synthesis of research on explicit teaching. *Educational Leadership, 43,* 60-69.

Ross, J. R., Hogaboam-Gray, A., & Hannay, L. (1999). Predictors of teachers' confidence in their ability to implement computer-based instruction. *Journal of Educational Computing Research, 21(*1), 75-97.

Rottier, J., Kelly, W., & Tomhave, W. K. (1983). Teacher burnout-small and rural school style. *Education, 104*(1), 72-79.

Ruhland, S. K., & Bremer, C. D. (2002). *Alternative teacher certification procedures and professional development opportunities for career and technical education teachers.* St. Paul: The National Research Center for Career and Technical Education, University of Minnesota.

Ruhland, S. K., & Bremer, C. D. (2002). Professional development needs of novice career and technical education teachers. *Journal of Career and Technical Education, 19*(1), 18-31.

Sahin, C. (2008). Evaluation of the assessment and evaluation of the primary school program in Turkey: A case study. *World Applied Sciences Journal, 3*(2), 206-214.

Salin, S. (2002). Adult education and lifelong learning in Sweden. *Integrating Lifelong Learning Perspectives, 92*, 820-1115.

Sandholtz, J. H. (2002). Inservice training or professional development: Contrasting opportunities in a school/university partnership. *Teaching and Teacher Education, 18,* 815-830.

Sandholtz, J. H., & Scribner, S. B. (2006). The paradox of administrative control in fostering teacher professional development. *Teaching and Teacher Education, 22*(8), 1104-1117.

Sato, K., & Kleinsasser, R. C. (2004). Beliefs, practices and interactions in a Japanese high school English department. *Teaching and Teacher Education, 20*(8), 797-816.

Selimoğlu, E., & Yılmaz, H. B. (2009). Hizmet içi eğitimin kurum ve çalışanlar üzerine etkileri. *Sosyoloji ve Politika Dergisi*, *5*(1), 1-12.

Sexton, D., Synder, P., Wolfe, B., Lobman, M., Strickler, S., & Akers, P. (1996). Early intervention inservice training strategies: Perceptions and suggestions from the field. *Exceptional Children, 62*(6), 485-495.

Shann, M. H. (1998). Professional commitment and satisfaction among teachers in urban middle schools. *The Journal of Educational Research, 92*(2), 67-73.

Shulman, L. S. (1986). Those who understand knowledge growth in teaching. *Educational Researcher, 15*(2), 4-14.

Simsek, H., & Yildirim, A. (2001). The reform of pre-service teacher education in Turkey. In R. G. Sultana (Ed.), *Challenge and change in the Euro-Mediterranean region: Case studies in educational innovation.* (pp.411-430). USA: Peter Lang Publishing, Inc.

Smith, K. (2005). Teacher educators' expertise: What do novice teachers and teacher educators say? *Teaching and Teacher Education, 21,* 177-192.

Smith, P. L., & Ragan, T. J. (2005). *Instructional design.* Hoboken, NJ: Wiley.

Smith, T. D., McMillan, B. F., & Bradley, F. (2001, February). *A primer of model fit indices in structural equation modeling.* Paper presented at Annual Meeting of the Southwest Educational Research Association, New Orleans, LA.

Snow-Gerono, J. L. (2005). Professional development in a culture of inquiry: PDS teachers identify the benefits of professional learning communities. *Teaching and Teacher Education, 21*(3), 241-256.

Sparks, D. (2002) Designing powerful professional development for teachers and principals (Oxford, OH, National Staff Development Council).

Steiger, J. H., & Lind, J. C. (1980). *Statistically based tests for the number of common factors.* Paper presented at the Psychometric Society Annual Meeting, Iowa City, IA.

Stuart, J. S., & Tatto, M. T. (2000). Designs for initial teacher preparation programs: An international view. *International Journal of Educational Research, 33*, 493-514.

Supovitz, J. A. (2001). Translating teaching practice into improved student performance. In Fuhrman, S. (Ed.), *From the capitol to the classroom: Standards-based reform in the states. 100th Yearbook of the National Society for the Study of Education, Part 2* (pp. 81-98). Chicago: University of Chicago Press.

Supovitz, J. A., Mayer, D. P., & Kahle, J. B. (2000). Promoting inquiry-based instructional practice: The longitudinal impact of professional development in the context of systemic reform. *Educational Policy, 14*(3), 331-356.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York: Allyn and Bacon.

The Teaching Commission (2004). *Teaching at risk: A call to action.* NewYork: The Teaching Commission, The CUNY Graduate Center.

Theis, A., Jr. (1981). *Teachers' attitudes toward in-service programs.* (ERIC Document Reproduction Service No. ED 210 251).

Toluk, Z. (1994). *A study on the secondary school teachers' views on the importance of mathematical knowledge they teach and pedagogical knowledge and when they acquired this knowledge.* (Unpublished master's thesis). Middle East Technical University, Ankara, Turkey.

Tyler, R. W. (1949). *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.

Uney, A. (2006). *The problems faced by the science teachers graduated from different branches.* (Unpublished master's thesis). Karadeniz Technical University, Trabzon, Turkey.

Veenman, S., Van Tulder, M., & Voeten, M. (1994) The impact of in-service training on teacher behaviour. *Teaching and Teacher Education, 10*(3), 303-317.

Vukelich, C., & Wrenn, L. C. (1999). Quality professional development: What do we think we know? *Childhood Education, 75*(3), 153-160.

Wade, R. K. (1985). What makes a difference in in-service teacher education? *A meta-analysis of research. Educational Leadership, 42*(4), 48-54.

Weston, R., & Gore, P. A. (2006). A brief guide to Structural Equation Modeling. *The Counseling Psychologist, 34*(5), 719-751.

Wilson, S. M., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary professional development. *Review of Research in Education, 24,* 173-209.

World Bank. (2005). *Turkey- Education sector study.* Document of the World Bank, Washington D.C.

Wong, E. K. P., & Yeung, A. S. (2003). Evaluation of teacher development programs: Participant satisfaction and recommendation. *Studies in Educational Evaluation, 29,* 57-66.

Wray, D. (1989) Negotiating needs in school-focused inset. *British Journal of In-Service Education, 15*(3), 145-149.

Wyatt III, R. L., & White J. E. (2007). *Making your first year success: A classroom survival guide for middle and high school teachers*. CA: Corwin Press, Thousand Oaks.

Yalçınkaya, M. (2002). Yeni öğretmen ve teftiş. *Milli Eğitim Dergisi, 150,* 153-154.

Yalın, H. İ. (2001). Hizmetiçi eğitim programlarının değerlendirilmesi. *Milli Eğitim Dergisi, 150.*

Yarrow, A., Ballantyne, R., Hansford, B., Herschell, P., & Millwater, J. (1999). Teaching in rural and remote schools: A literature review. *Teaching and Teacher Education, 15*(1), 1-13.

Yildizlar, M., & Kargi, E. (2010). Preschool teachers' expectations and evaluations on the effects of in-service teacher education in the Turkish Republic of Northern Cyprus. *Procedia Social and Behavioral Sciences, 2,* 1951-1954.

Yoon, K. S., Duncan, T., Lee, S. W.-Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007–No.033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.

Yuen, A. H. K., & Ma, W. W. K. (2002). Gender differences in teacher computer acceptance. *Journal of Technology and Teacher Education, 10*(3), 365-382.

Zeichner, K. (1999). The new scholarship in teacher education. *Educational Researcher, 28(9), 4-15.*

Appendix A

IN-SERVICE TEACHER TRAINING SURVEY

FORM ID

HİZMETİÇİ EĞİTİM PROGRAMLARI ARAŞTIRMASI

Bu araştırmayı, ihtiyaç duyduğunuz hizmetiçi eğitimleri belirlemek ve bunların nasıl yapılması gerektiği konusunda değerlendirme yapmak amacıyla yürütmekteyiz. Yanıtlarınız sadece akademik amaçlarla kullanacaktır. Lütfen formdaki hiçbir soruyu yanıtsız bırakmayınız. Katılımınız için teşekkürler!

Tuba Gökmenoğlu
ODTU Eğitim Fakültesi

LÜTFEN ANKETİ KURŞUN KALEMLE VE YUVARLAKLARIN İÇİ TAMAMEN DOLACAK ŞEKİLDE DOLDURUNUZ. ANKETİ BURUŞTURUP KATLAMAYINIZ.

Bölüm I - Genel Özellikler

1. **Cinsiyetiniz:**
   (1) Kız (2) Erkek

2. **Yaşınızı kodlayınız:**

3. **Görev yaptığınız ilin plaka numarasını kodlayınız**

4. **Hangi alanda öğretmenlik yapıyorsunuz?**
   (1) Sınıf (1-5 arası) (2) Matematik
   (3) Fen ve Teknoloji (4) Türkçe
   (5) İngilizce (6) Sosyal Bilgiler

5. **Öğrenim durumunuz:**
   (1) Yüksekokul/Eğitim Enstitüsü (2) Yüksek Lisans
   (3) Lisans (4) Doktora

6. **Mezun olduğunuz fakülte/yüksek okul:**
   (1) Eğitim (2) Mühendislik (3) Ziraat
   (4) Fen Edebiyat (5) Güzel Sanatlar (6) Hukuk
   (7) İktisadi İdari B. (8) Spor akademisi (9) İlahiyat
   (10) Mimarlık (11) İletişim (12) Veteriner
   (13) Meslek yüksekokulu
   (14) Diğer .....

7. **Mezun olduğunuz alanda mı öğretmenlik yapıyorsunuz?**
   (1) Evet (1) Hayır

8. **Görev yaptığınız okul türü:**
   (1) İlköğretim (2) YİBO (3) PİO (4) Diğer.....

9. **Görev yaptığınız yerleşim birimi:**
   (1) Nüfusu 1 milyon ve üzeri il merkezi (2) Kasaba
   (3) Nüfusu 1 milyonun altı il merkezi (4) Köy
   (5) İlçe

10. **Halen görev yaptığınız okuldaki istihdam şekliniz:**
    (1) Kadrolu (2) Sözleşmeli (3) Ücretli (4) Vekil

11. **Öğretmenlik meslek yılınızı kodlayınız:**

12. **Görev yaptığınız okuldaki öğrenci sayısı:**

13. **Okulunuzdaki öğretmen sayısını kodlayınız:**

14. **Okulunuzdaki ortalama sınıf mevcudunu kodlayınız:**

15. **Şuana kadar kaç adet kursa başvurdunuz:**

16. **Şuana kadar kaç adet kursa katıldınız:**

Bölüm II - Hizmetiçi Eğitim İhtiyaçları		
Lütfen aşağıda verilen her bir alanla ilgili alt konularda *hizmetiçi eğitime* ne derece ihtiyacınız olduğunu belirtiniz.		
Hiç ihtiyacım yok 1	**İhtiyacım yok 2**	**Biraz ihtiyacım var 3** **İhtiyacım var 4** **Çok ihtiyacım var 5**
A. Öğretmenlik meslek bilgisine yönelik	1. eğitimde yeni yaklaşımlar hakkında	① ② ③ ④ ⑤
	2. öğretim yöntem ve ilkeleri hakkında	① ② ③ ④ ⑤
	3. öğretimi planlama konusunda	① ② ③ ④ ⑤
	4. sınıf yönetiminin temel yöntemleri hakkında	① ② ③ ④ ⑤
	5. ölçme ve değerlendirme yöntemleri konusunda	① ② ③ ④ ⑤
	6. değişen paradigmalar ve eğitim sistemlerini tartışma üzerine	① ② ③ ④ ⑤
	7. gelişim ve öğrenme psikolojisi hakkında	① ② ③ ④ ⑤
	8. mesleki etik hakkında	① ② ③ ④ ⑤
	9. sosyal etkinlik planlama ve uygulama hakkında	① ② ③ ④ ⑤
	10. öğretmen adaylarına (stajyer öğrencilere) rehber olma hakkında	① ② ③ ④ ⑤
B. Öğretmenlik alan bilgisine yönelik	1. öğretmenlik yaptığım alandaki bilgileri yeniden hatırlama hakkında	① ② ③ ④ ⑤
	2. öğretmenlik yaptığım alandaki yeni bilgileri öğrenme konusunda	① ② ③ ④ ⑤
	3. öğretmenlik yaptığım alanı günlük hayatla bağdaştırma hakkında	① ② ③ ④ ⑤
	4. alanımla ilgili eğitim kaynak ve araçları inceleme/seçme hakkında	① ② ③ ④ ⑤
	5. alanımla ilgili ders materyali/etkinlik geliştirme hakkında	① ② ③ ④ ⑤
	6. alanımla ilgili geliştirilen ders materyallerinin kullanımı hakkında	① ② ③ ④ ⑤
	7. eğitim programlarında yapılan yenilikler/değişiklikler hakkında	① ② ③ ④ ⑤
	8. alanımla ilgili öğrencilerde olumlu tutum geliştirme hakkında	① ② ③ ④ ⑤
C. Eğitimde teknoloji ve bilgisayar kullanımına yönelik	1. temel bilgisayar bilgisi hakkında	① ② ③ ④ ⑤
	2. ofis yazılımlarının (word, excel, powerpoint, vb) kullanımı hakkında	① ② ③ ④ ⑤
	3. İnternet kullanımı (arama yapma, dosya indirme, eposta) hakkında	① ② ③ ④ ⑤
	4. İnternet yardımı ile ders içeriği hazırlayabilme hakkında	① ② ③ ④ ⑤
	5. ofis yazılımları ile etkin öğretim materyali hazırlama hakkında	① ② ③ ④ ⑤
	6. Flash vb programlarla etkin öğretim materyali hazırlama hakkında	① ② ③ ④ ⑤
	7. sinevizyon/projektör kullanımı hakkında	① ② ③ ④ ⑤
	8. akıllı tahta kullanımı hakkında	① ② ③ ④ ⑤
D. Sınav tanıtımına yönelik	1. ortaöğretim öğrenci başarılarının belirlenmesi sınavı (ÖBBS) hakkında	① ② ③ ④ ⑤
	2. değişen orta öğretime geçiş sistemi (SBS) hakkında	① ② ③ ④ ⑤
	3. PIRLS, TIMSS ve PISA gibi uluslararası sınavların tanıtımı hakkında	① ② ③ ④ ⑤
E. Rehberlik ve özel eğitime yönelik	1. eğitim koçluğu hakkında	① ② ③ ④ ⑤
	2. psikolojik yardıma ihtiyacı olan öğrenciler hakkında	① ② ③ ④ ⑤
	3. öğrenme güçlüğü çeken öğrenciler hakkında	① ② ③ ④ ⑤
	4. eğitimde bireysel farklılıklar hakkında	① ② ③ ④ ⑤
	5. eğitim kurumlarında suç ve şiddeti önleme hakkında	① ② ③ ④ ⑤
	6. çalışan ve risk altındaki çocukların eğitimi hakkında	① ② ③ ④ ⑤
	7. üstün veya özel yetenekli öğrencilerin eğitimi hakkında	① ② ③ ④ ⑤
F. İletişim ve sosyal becerilerine yönelik	1. meslektaşlarımla iletişim hakkında	① ② ③ ④ ⑤
	2. velilerle iletişim hakkında	① ② ③ ④ ⑤
	3. öğrencilerle iletişim hakkında	① ② ③ ④ ⑤
	4. yeni görev yerine (şehir, bölge vb) uyum sağlama hakkında	① ② ③ ④ ⑤
G. Kişisel gelişime yönelik	1. güzel ve etkili konuşma hakkında	① ② ③ ④ ⑤
	2. yabancı dil öğrenimi hakkında	① ② ③ ④ ⑤
	3. sorun çözme teknikleri hakkında	① ② ③ ④ ⑤
	4. hızlı okuma teknikleri hakkında	① ② ③ ④ ⑤
	5. sağlık bilgisi ve ilkyardım hakkında	① ② ③ ④ ⑤
	6. proje hazırlama/yönetimi hakkında	① ② ③ ④ ⑤
H. Sosyal bilinç gelişimine yönelik	1. demokratik yurttaşlık ve insan hakları hakkında	① ② ③ ④ ⑤
	2. kültür ve tabiat varlıklarımızın korunması hakkında	① ② ③ ④ ⑤
	3. tüketici bilinci ve hakları hakkında	① ② ③ ④ ⑤
	4. temel afet bilinci hakkında	① ② ③ ④ ⑤
	5. medya okuryazarlığı hakkında	① ② ③ ④ ⑤
	6. çevrenin korunması/ sürdürülebilir kalkınma hakkında	① ② ③ ④ ⑤

Bölüm III - Hizmetiçi Eğitim Kurs Tercihleri			
Lütfen hizmetiçi eğitim kurslarına yönelik tercihlerinizi düşünerek her ifadeyi tercihin artışına göre 1, 2, 3, 4 ve 5 arasında değerlendiriniz. **Bundan sonra katılacağım hizmetiçi eğitim kurslarında;**			
Hiç tercih etmem - Tercih etmem - Ne tercih ederim ne de etmem - Tercih ederim - Kesinlikle tercih ederim			
			1 2 3 4 5
A. Kurs içeriğinin	1.	öğretmen ihtiyaçlarının analizi sonucunda belirlenmesini	1 2 3 4 5
	2.	gerektirdiği materyal ve kaynakların önceden duyurulmasını	1 2 3 4 5
	3.	eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesini	1 2 3 4 5
	4.	katılımcılar tarafından tartışılıp sonra eğitimci tarafından anlatılmasını	1 2 3 4 5
	5.	katılımcılara tamamen soru cevap yoluyla öğretilmesini	1 2 3 4 5
B. Eğitimcilerin	1.	akademisyen olmasını	1 2 3 4 5
	2.	okul yöneticisi olmasını	1 2 3 4 5
	3.	MEB görevlisi olmasını	1 2 3 4 5
	4.	müfettiş olmasını	1 2 3 4 5
C. Kurs yeri	1.	kursların uzaktan öğrenme şeklinde yapılmasını	1 2 3 4 5
	2.	kursların görev yaptığım ilde olmasını	1 2 3 4 5
	3.	kursların görev yaptığım ilden farklı bir ilde olmasını	1 2 3 4 5
D. Kurs zamanı	1.	okul kapandıktan sonra (haziran ayı seminer dönemi) yapılmasını	1 2 3 4 5
	2.	yaz tatilinde (temmuz ve ağustos) yapılmasını	1 2 3 4 5
	3.	okul açılmadan (eylül ayı seminer dönemi) yapılmasını	1 2 3 4 5
	4.	ara tatilde (şubat ayı) yapılmasını	1 2 3 4 5
	5.	ders döneminde ders çıkışlarında yapılmasını	1 2 3 4 5
	6.	ders döneminde hafta sonları yapılmasını	1 2 3 4 5
E. Katılımcıların	1.	tamamının öğretmen olmasını	1 2 3 4 5
	2.	aynı branştan olmasını	1 2 3 4 5
	3.	kendi isteğiyle eğitime katılmasını	1 2 3 4 5
	4.	her birinin farklı okullardan ve bölgelerden gelmesini	1 2 3 4 5
F. Kursun değerlendirmesinin	1.	çevrimiçi (online) anket ile yapılmasını	1 2 3 4 5
	2.	tek sınav şeklinde olmasını	1 2 3 4 5
	3.	birden fazla yöntemle olmasını	1 2 3 4 5
	4.	derse katılımın değerlendirmede önemli bir boyut olmasını	1 2 3 4 5
	5.	sonuçlarının yükselme, atama vb durumlar için etkili olmasını	1 2 3 4 5
	6.	eğitim kazanımlarının daha sonrasında takibinin olmasını	1 2 3 4 5

3.	**Aşağıda verilen okul dışı etkinlikleri ne sıklıkla yaptığınızı sıklığın artışına göre 1, 2, 3, 4 ve 5 arasında değerlendiriniz.**	
	Hiçbir zaman - Birkaç senede 1 kez - Ayda 1 den fazla - Haftada 1 kez - Her gün	
		1 2 3 4 5
1.	Ders kitaplarını incelemek	1 2 3 4 5
2.	Mesleki gelişim amaçlı bir kitap okumak	1 2 3 4 5
3.	Akademik olan süreli yayınları takip etmek	1 2 3 4 5
4.	Üniversitelerde seminere katılmak	1 2 3 4 5
5.	Hizmetiçi eğitimlere katılmak	1 2 3 4 5
6.	Avrupa Birliği projelerinde yer almak	1 2 3 4 5
7.	Kongre, konferans ve bilimsel toplantılara katılmak	1 2 3 4 5
8.	Akademik (üniversite işbirliğiyle) projelerde yer almak	1 2 3 4 5
9.	Alanla ilgili gazete, dergi, tv programlarını takip etmek	1 2 3 4 5
10.	Okul idaresi tarafından düzenlenen seminere katılmak	1 2 3 4 5

FORM ID

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Bölüm IV - Hizmetiçi Eğitim Kurslarının Değerlendirilmesi

Bağlı bulunduğunuz Milli Eğitim Müdürlüğü tarafından verilen hizmetiçi eğitim kurslarının *niteliğini* düşünerek aşağıda verilen ifadelerin katıldığınız kursların ne kadarı için geçerli olduğunu belirtiniz.

Hiçbiri için geçerli değil	Az bir kısmı için geçerli	Yarıya yakını için geçerli	Çoğu için geçerli	Tamamı için geçerli
1	2	3	4	5

A. Katılımcıların	1.	eğitim düzeyleri yaklaşık olarak birbirine denkti.	1 2 3 4 5
	2.	branşları aynıydı.	1 2 3 4 5
	3.	tamamı öğretmendi.	1 2 3 4 5
	4.	eğitimlere yönelik ilgileri yüksekti.	1 2 3 4 5
	5.	eğitimler sırasında katılımcılar aktifti.	1 2 3 4 5
B. Eğitim içerikleri	1.	teorik düzeyde ihtiyacımı karşıladı.	1 2 3 4 5
	2.	uygulama düzeyinde ihtiyacımı karşıladı.	1 2 3 4 5
	3.	güncel di.	1 2 3 4 5
	4.	benim için anlaşılırdı.	1 2 3 4 5
	5.	sınıfta karşılaşabileceğim durumlarla örneklendirildi.	1 2 3 4 5
	6.	yoğunluğu makul düzeydeydi.	1 2 3 4 5
	7.	meslekî anlamda katkıda bulundu.	1 2 3 4 5
	8.	konuya olan ilgi ve hevesimi arttırdı.	1 2 3 4 5
	9.	öğretmenlik dışında kişisel olarak bir fayda sağladı.	1 2 3 4 5
C. Eğitimciler	1.	konuları açık/anlaşılır bir şekilde sundular.	1 2 3 4 5
	2.	eğitim materyallerini katılımcılarla paylaştılar.	1 2 3 4 5
	3.	eğitim içeriğine uygun materyaller kullandılar.	1 2 3 4 5
	4.	öğrenmeyi kolaylaştırıcı nitelikte materyaller kullandılar.	1 2 3 4 5
	5.	eğitimden sonra kullanılabilir nitelikte materyaller seçtiler.	1 2 3 4 5
	6.	konunun anlaşılmasına yardımcı materyaller kullandı.	1 2 3 4 5
	7.	dersi, öğrenme isteğimi artıracak şekilde sundular.	1 2 3 4 5
	8.	ders içeriğini alanımla ilişkilendirdiler.	1 2 3 4 5
	9.	sınıf yönetimi becerilerinden memnun kaldım.	1 2 3 4 5
	10.	uygun öğretim yöntemleri tercih ettiler.	1 2 3 4 5
	11.	kurs sonunda derslerinin değerlendirilmesini yaptırdılar.	1 2 3 4 5
	12.	kaynak ve materyalleri yeterince iyi kullandılar.	1 2 3 4 5
	13.	katılımcıların öğrenme hızına uygun hızda eğitim verdiler.	1 2 3 4 5
	14.	katılımcıların var olan bilgi düzeyini dikkate aldılar.	1 2 3 4 5
	15.	etkin bir şekilde derse katılımımı teşvik ettiler.	1 2 3 4 5
	16.	ders sürelerini verimli kullandılar.	1 2 3 4 5
	17.	içerikle ilgili sorulara tatmin edici cevaplar verdiler.	1 2 3 4 5
D. Organizasyon	1.	kurslara ilişkin katılım duyurusu zamanında yapıldı.	1 2 3 4 5
	2.	kursların yapıldığı tarihler benim için uygundu.	1 2 3 4 5
	3.	kurslar öncesi yapılan bilgilendirme/yönlendirme yeterliydi.	1 2 3 4 5
	4.	kursların yapıldığı yerler (semt vb) uygundu.	1 2 3 4 5
	5.	eğitimlerde yapılan duyurular/yönlendirmeler yeterliydi.	1 2 3 4 5
	6.	defter, kalem, bilgisayar gibi gerekli ihtiyaçlar karşılandı.	1 2 3 4 5
E. Eğitim merkezleri	1.	kurslarda sunulan yiyecek ve içecek ikramları yeterliydi.	1 2 3 4 5
	2.	salonlar sıcaklık bakımından öğrenmeye uygundu.	1 2 3 4 5
	3.	salonlar aydınlatma bakımından öğrenmeye uygundu.	1 2 3 4 5
	4.	salonlar genişlik bakımından öğrenmeye uygundu.	1 2 3 4 5
	5.	salonlar teknik donanım açısından yeterliydi.	1 2 3 4 5
	6.	koordinatörler eğitimlerin etkili yürütülmesini sağladı.	1 2 3 4 5
	7.	koordinatörlerin sorunlara yaklaşımı uygundu.	1 2 3 4 5
F. Değerlendirme	1.	kurslar sonunda öğrenme düzeyi değerlendirildi.	1 2 3 4 5
	2.	kullanılan değerlendirme yöntemlerinden memnunum.	1 2 3 4 5
	3.	birden fazla yöntem kullanıldı.	1 2 3 4 5
	4.	sorular açık/anlaşılır nitelikteydi.	1 2 3 4 5
	5.	sorular tüm içeriği kapsamıştı.	1 2 3 4 5
	6.	adildi.	1 2 3 4 5

Hizmetiçi eğitimlerle ilgili başka eklemek istedikleriniz varsa lütfen belirtiniz

Appendix B

PERMISSION FROM METU ETHIC COMMITTEE

1956

Orta Doğu Teknik Üniversitesi
Middle East Technical University
Fen Bilimleri Enstitüsü
Graduate School of
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Fax: +90 (312) 2107959
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Sayı: B.30.2.ODT.0.AH.00.00/126/ 118-459

28 Mart 2011

Gönderilen: Prof. Dr. Ercan Kiraz
Eğitim Bilimleri Bölümü

Gönderen : Prof. Dr. Canan Özgen
IAK Başkan Yardımcısı

İlgi : Etik Onayı

"Exploring and Modeling of the In-service Training Needs of Teachers" isimli araştırmanız "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

28/03/2011

Prof.Dr. Canan ÖZGEN
Uygulamalı Etik Araştırma Merkezi
(UEAM) Başkanı
ODTÜ 06531 ANKARA

Appendix C

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Gokmenoglu, Tuba
Nationality: Turkish (TC)
Date and Place of Birth: 12 August 1984, Edirne
email: tubafidan@yahoo.com

EDUCATION

Degree	Institution	Graduation
PhD	METU Educational Sciences	2012
BS	METU Elementary Mathematics Education	2007
High School	Teachers' Anatolian High School Edirne	2002

WORK EXPERIENCE

Year	Place	Enrollment
2011-2012	Arizona State University	Visiting Researcher
2007- 2011	METU Dept. of Educational Sciences	Research Assistant

SELECTED PUBLICATIONS

Gokmenoglu, T. & Eret, E. (2011). Curriculum development in Turkey from the viewpoints of research assistants of curriculum and instruction department. *Elementary Education Online, 10*(2), 667-681.

Gokmenoglu, T. & Kiraz, E. (2011). Toward their professional development: Do the prospective teachers benefit from academic and social facilities? A METU case. *Türk Eğitim Bilimleri Dergisi, 9*(2), 393-410.

Gokmenoglu, T., Eret, E. & Kiraz, E. (2010). Crises, reforms, and scientific improvements: Behaviorism in the last two centuries. *Elementary Education Online, 9*(1), 292-300.

Eret, E. & Gokmenoglu, T. (2010). Plagiarism in higher education: A case study with prospective academicians. *Procedia - Social and Behavioral Sciences, 2*(2), 3303–3307.

Appendix D
TURKISH SUMMARY

TÜRKÇE ÖZET

ÖĞRETMENLERİN HİZMETİÇİ EĞİTİM İHTİYAÇLARI VE TASARIM TERCİHLERİ

Giriş

Bu çalışma, Türkiye'de ilköğretimde görev yapan öğretmenlerin ne tür hizmetiçi eğitim programlarına ihtiyaç duyduğunu ortaya çıkarmayı hedeflemektedir. Daha özel olarak, bu çalışma Türkiye'de ilköğretimde görev yapan öğretmenlerin ihtiyaç ve tercihlerine dayanarak bir hizmetiçi eğitim modeli önermeyi amaçlamaktadır.

Bilindiği gibi öğretme alanında önemli değişimler gözlenmektedir. Sınıf yaşamının nerdeyse tüm noktalarında gözlenen değişimler okul felsefesini, öğretme ve öğrenme uygulamalarını, yapılan bilimsel araştırmaların yönünü ve dolayısıyla tüm toplumu etkilemektedir. Değişimlerin sık ve sürekli olduğu toplumlarda değişimlerin sonuçlarının gerisinde kalmak kaçınılmazdır. Bu noktada Darling-Hammond'nun (2006) özetlemiş olduğu gibi herhangi bir yüzyıl ve herhangi bir toplumda öğretmenlerin hayati bir role sahip olduğunun kabul edilmesiyle birlikte öğretmen eğitiminin odak noktası haline gelmiş olması bir süpriz değildir. Bu hayati role sahip öğretmenlerin yenilikleri ve değişimleri takip etmesi, güncel konular hakkında bilgilenmesi ve eğitim reformlarına uyum göstermesi gerekmektedir. Bu noktada sorulması gereken en önemli soru *öğretmenlik üzerine üniversite eğitimi almak* donanımlı öğretmenin özelliklerinden biri olmasına (Glathorn, Jones ve Bullock, 2006) rağmen üniversite yıllarında alınan dersler göreve başladıktan sonraki 20-30 yıl için de yeterli olacak mıdır? Bu doğrultuda,

görev başlangıcından emekli oluncaya kadar olan tüm öğretmen deneyimleri olarak tanımlanan meslek eğitimi (Henderson, 1978) öğretmen eğitimcilerinin gündemine ilk sıralardan girmektedir.

Değişimler ve bu değişimlerin öğretim üzerine etkileri ülkemizde her zaman üzerinde durulması gereken bir konu olmuştur. Bu noktada üniversiteler öğretmen eğitimin kalitesini arttırmak konusunda önemli çabalar sarf etmektedirler; ancak çalışmalar göstermiştir ki öğretmen eğitimi sırasında alınan dersler öğretmenlere ya gerçek sınıf ortamında yeterince yardımcı olmamaktadır ya da derslerde verilen vakalarla günlük hayat arasında bir bağ kurulamamaktadır (Bulut ve diğerleri, 1995; Toluk, 1994). Sonuç olarak öğretme standartlarının sürekli yükseldiği göz önünde bulundurularak bilgilerin güncellenmesinde ve eğitim reformların uyum sürecinde öğretmenlere verilecek yardımcı eğitimin önemi yadsınamayacaktır (Brantner, 1964). Paralel olarak Çakıroğlu ve Çakıroğlu (2003) eğer reformların amacı çoğunlukla öğretmen yeterliliklerine bağlı olan okul programlarının başarısı ise hedeflere ulaşmak için anahtarın öğretmenlerin meslek eğitimi olduğunu vurgulamaktadırlar. Bu noktada öğretmenlerin öğretmen eğitimlerinin üzerine bilgi ekleyebilmeleri için hizmetiçi eğitim bir zorunluluk olarak belirtilmiştir (Desmarais, 1992). Guskey'e (2002) göre eğitimi geliştirecek neredeyse her türlü modern önerinin temelinde yüksek kalitede mesleki eğitim yatmaktadır. Aynı doğrultuda Purdon (1999) öğretmen standartlarını yükseltmenin altın kuralının meslek süresince devam edecek olan mesleki gelişim olduğunu öne sürmektedir. Benzer şekilde Wyatt III ve White (2007) bunu destekleyerek yetkin öğretme eğitimin öğrenci eğitiminden başlayarak emekliliğe kadar sürecek olan yaşamboyu öğrenme şeklinde devam ettiğini belirtmişlerdir. Son 40 yıldır öğretmen eğitimcileri ve yöneticileri yaşamboyu öğrenme kapsamında yaşamboyu öğrenecek öğrencileri yetiştiren öğretmenlerin donanımında yardımcı eğitimlere odaklanmaya başlamışlardır (Coolahan, 2002). Desmarais'a (1992) göre hizmetiçi eğitim öğretmen becerilerinin geliştirilmesinden öğretmenin değişen eğitim ve toplumu takip edebilmesi yönünde desteklenmesine doğru değişim göstermiştir. Benzer şekilde Friedlander ve diğerleri (2004) reformlar için öğretmenleri desteklemenin en temel yönteminin hizmetiçi eğitim programları olduğunu

vurgulamaktadırlar. Son zamanlarda hizmetiçi eğitime önemli miktarda zaman, para ve çaba harcanmasına rağmen programların henüz istenen başarıya ulaşamadığı söylemek yanlış olmayacaktır (Borko, 2004; Veenman, Tulder ve Voeten, 1994). Meslek eğitiminin önemi konusunda bir fikir birliği olsa da bu programların tasarım ve işleyiş süreçlerinin nasıl ele alınacağı halen sorgulanan konular arasındadır. Bu noktada tartışmayı yönlendiren sorular şu şekilde ortaya çıkmaktadır: *Mesleki eğitim programlarına kim karar vermelidir? Bu programlar nasıl tasarlanmalıdır? Bu programlar öğrenenlerin ihtiyaçlarına yönelik mi tasarlanmaktadır? Bu programlar öğrenenlerin varolan bilgi ve becerilerini geliştirmelerinde ne kadar etkilidirler? Öğretmenler için en etkili tasarımlar hangileridir?* Bu soruların yanıtlarının verilmesiyle hedeflenen kitle için en uygun mesleki eğitim tasarımlarının yapılabileceği düşünülmektedir.

Alanyazına bakıldığında öğretmen eğitimi üzerine yapılmış çok sayıda çalışma ile karşılaşılmaktadır. Jager ve diğerleri (2002) ve Kealey ve diğerleri (2000) yapmış oldukları deneysel çalışmalarda uygun eğitimin verilmesi durumunda öğretmenlerin öğrenme ve öğretme üzerine fikir ve davranışlarını değiştirdiklerini gözlemlemişlerdir. Benzer olarak Angrist ve Lavy (2001) çalışmalarında test puanlarını yükseltmenin en uygun maliyetli yönteminin öğretmen eğitimi olduğunu tespit etmişlerdir. Konuya yönelik yalnızca eğitimcilerin ve hükümetlerin değil aynı zamanda öğretmenlerin kendilerinin de ilgisi artmıştır. Öğretmenler mesleki gelişimleri için en umut vadeden yöntemin mesleki eğitim olduğunu düşünmektedirler (Fullan, 1982, 1991, 1993). Buna paralel olarak, genellikle öğretmenler okul yöneticileri ve bakanlık tarafından mesleki gelişim etkinliklerine katılmaya teşvik edilseler de öğretmenlerin çoğu bu etkinliklere katılmanın onların gelişimine katkıda bulunacağını ve yetkinliklerini artıracaklarını düşünmektedirler (Guskey, 2002). Huberman'a (1995) göre de öğretmenler yeterliliklerini desteklemede ve daha fazla mesleki tatmin sağlamada hizmetiçi eğitimleri köşe taşı olarak görmektedirler. Alanyazındaki tüm bu sonuçlardan yola çıkarak hizmetiçi eğitimlerin öneminin herkesçe kabul edildiği günümüzde öğretmenlere verilecek yardımcı eğitimlerin öğretmen ihtiyaçlarına yönelik olması harcanacak zaman, para ve çabanın eğitim sistemine geri dönüşü

açısından önemi vurgulanmalıdır. Bununla ilintili olarak, alanyazına göre en sık vurgulanan reform girişimleri ve yüksek standartlı öğretim modelleriyle ilişkili hizmetiçi eğitimlere ihtiyaç duyulmaktadır (Guskey, 2003). Ayrıca öğretmenler hizmetiçi eğitimlerden sınıflarındaki günlük işlemlerde doğrudan ilişkilendirebilecekleri pratik fikirler edinebilmeyi beklemektedirler (Fullan ve Miles, 1992). Karagiorgi ve Symeou (2007) Güney Kıbrıs'taki öğretmenlerin öncelikli eğitim ihtiyaçlarının öğrenmede öğrenci motivasyonu, bilgisayar teknikleri, öğretmenliğin yeni yöntem ve modelleri, eğitim reformları ve varolan eğitim programları hakkında olduğunu belirtmektedirler. Başka bir çalışmada Fok ve diğerleri (2005) Hong Kong'daki öğretmenlerin ihtiyaçlarını araştırmışlar ve öğrenmenlerin en çok yenilikçi öğretim teknikleri, okul temelli program geliştirme, birey gelişimi, programa uyum, proje temelli öğrenme uygulamaları, öğrenci gelişimi hakkında yönlendirme ve bilgi teknolojilerinin öğretimde uygulamaları gibi konularda eğitimlere ihtiyaç duyduklarını belirlemişlerdir. Şahin (2008) yeni ilköğretim programlarının değerlendirme süreçleri üzerine yaptığı araştırmada öğretmenlerin çok acil bir şekilde yeni programın değerlendirme süreç ve yöntemlerine yönelik hizmetiçi eğitime ihtiyaç duyduklarını bulmuştur. Baran ve Çağıltay (2006) öğretmenlerin gerçek sınıf vakalarına uygulanabilecek türde eğitimlere ihtiyaç duyduklarını belirtmektedirler. Öztaşkın (2010) ise sosyal bilgiler öğretmenlerine yönelik yürütmüş olduğu çalışmasında öğretmenlerin en çok materyal ve etkinlik geliştirmeye yönelik hizmetiçi eğitimlere ihtiyaç duyduklarını bulmuştur. Ayrıca mesleki teknik lise öğretmenlerinin hizmetiçi eğitim ihtiyaçlarına yönelik yapılan araştırma ise öğretmenlerin öğretim ilke ve yöntemlerine, teknolojinin eğitiminde kullanımına ve ölçme ve değerlendirme yöntemlerine yönelik hizmetiçi eğitimlere ihtiyaçları olduğunu göstermiştir (Erişen, 1997). OECD'nin TALIS (2010) raporunda da öğretmenlerin acil olarak geliştirmesi gereken yetkinlik alanlarının özel eğitime ihtiyaç duyan öğrencilerle öğretim (%28), bilgi ve iletişim teknolojileri ile öğretim (%14), çok kültürlü ortamlarda öğretim (%14,5) ve öğrencilerde disiplin ve davranış sorunları (%13)olarak vurgulanmıştır. Son olarak, Hizmetiçi Eğitim Daire Başkanlığı'nın (2011) yürütmüş olduğu GZFT analizi sonuçlarına göre kurumun zayıf yanlarından birinin de gerekli ihtiyaç analizlerinin yapılmayışı olarak belirtilmiştir.

Alanyazında öğretmen ihtiyaçlarına yönelik çok sayıda çalışma olmamasına rağmen verilen hizmetiçi eğitimlerin değerlendirilmesine yönelik önemli miktarda araştırma ile karşılaşılmaktadır. Örneğin en çok atıf alan çalışmalar öğretmenin pedagoji ve alan bilgisinin gelişimine yönelik olan çalışmalardır (Guskey, 2003). Wade (1995) meta analiz çalışmasında hizmetiçi eğitim programlarının orta düzeyde etkili olduğu sonucuna varmıştır. Kealey ve diğerlerine (2000) göre alanyazında en sık karşılaşılan sorun hizmetiçi eğitimlerin uygulamalardaki başarısızlığıdır. Başka bir deyişle alanyazında hizmetiçi eğitimlerin ulaşmak isteği amaçlara ulaşamadığına yönelik çok sayıda çalışma ile karşılaşmak mümkündür (Guskey, 1986; Fullan, 1991). Bu başarısızlık iki sebepten kaynaklanabilir: öğretmenleri mesleki gelişime teşvik edecek motivasyon faktörlerinin ve öğretmen değişim süreçlerinin dikkate alınmayışı (Guskey, 1986). Benzer şekilde Darling-Hammond ve Ball (1999) yöneticilerin öğretmen etkiliğindeki öneminin farkında olmalarına rağmen öğretmen eğitiminde systematik bir mesleki gelişim eksik olduğunu ileri sürmektedirler. Bir diğer boyutta, mesleki gelişimin önemi herkes tarafından biliniyor olmasına rağmen, öğretmenler de hizmetiçi eğitimleri günlük yaptıkları işten tamamen ayrı bir olgu olarak algılamaktadırlar (Fullan, 1995). Öztaşkın (2010) sosyal bilgiler öğretmenleri ile yürüttüğü çalışmasında hizmetiçi eğitimlerde amaç ve etkinlikler arasında bir paralellik olmadığını, program içeriklerinin gereğinden fazla yüklü olduğunu, eğitimlerde çok iyi bilinen bazı teorilerin yeniden tekrarlandığını, sınıfların çok kalabalık ve teknik donanım açısından iyi olmadığını tespit etmiştir. Çatmalı (2006) "Gelecek için Eğitim" hizmetiçi eğitimi üzerine yaptığı araştırmasında eğitimin zayıf yönleri olarak program öncesi ihtiyaç analizlerinin eksikliğini, eğitimin zamanlamasını, kitapların öğretmenler için fazla kapsamlı olduğunu bildirmiştir. Son olarak HİEDB (2011) yürütmüş olduğu GZFT analizi sonucunda izleme ve değerlendirme çalışmalarının eksikliğini, eğitimciler ve eğitim yöneticileri için teşvik edici özelliklerin olmayışını, kısa, MEB bölümleri arasında yeterli iletişimin olmamasından kaynaklanan orta ve uzun vadede planlamanın eksikliğini ve kaynak yetersizliğinden ve hedef kitlenin büyüklüğünden kaynaklanan sağlıklı bir planlamanın yapılamayışını kurumun zayıf yanları olarak belirtmiştir.

Çalışmanın Önemi

Alanyazın taramasında da belirtilen tüm bu bulgular ışığında bu çalışmanın temel amacı Türkiye'de ilköğretim 1-8'de görev yapan öğretmenlerin ihtiyaç ve tercihlerine dayanarak hizmetiçi eğitim modeli oluşturmaktır. Çalışmanın sonunda sunulan program özellikleri MEB'na kaynakların daha etkin kullanılması açısından yol gösterecek nitelikte olup olası zaman, para ve enerji sarfiyatını azaltma gibi katkılarda bulunmayı hedeflemektedir. Ayrıca çalışma ADDIE tasarım modelinin ilk basamağı olan analiz basamağı niteliğinde olup bundan sonra geliştirilecek program tasarımlarının sonraki basamakları için emprik bir taban oluşturmaktadır. Son yıllarda öğretmenlerin hizmetiçi eğitimi konusu hem iş dünyasında hem de akademik çevrelerde dikkat çeken bir konu haline gelmiştir. Gelişmiş ülkelerde özel kuruluşların hazırladıkları hizmetiçi eğitimler öğretmenlerin gelişimi ve yetişen neslin eğitimi açısından önemli bir yere sahiptir. Günümüzde, Türkiye'de de hem özel sektör kuruluşlarının hem de MEB'nın bu konuya ilgileri artmıştır. Buna karşın kaynak kullanımının etkinliği konusu yeterince incelenmemiştir. Bu nedenle, araştırma sonuçlarının ilgili kurum ve kişilerce değerlendirilmesinin Türkiye'de verilen hizmetiçi eğitimlerin stratejik bir çerçevede yapılmasını sağlamada ve öğretmenlerin daha çok ihtiyaçlarına yönelik eğitim almasına yardımcı olmada yararlı olacağı düşünülmektedir.

Eğitim araştırmalarında öğretmen yetiştiren kurumlar ve eğitim fakültelerinde öğrenilenle günlük hayattaki uygulamalar arasında ortaya çıkan boşluktan ötürü hizmetiçi eğitimin altı sık sık çizilmeye başlanmıştır (Jarvis ve Algozzine, 2006; Lindgren, 2005). Bunlara ek olarak sürekli değişen ve yenilenen öğretim programları dikkate alındığında öğretmenlere verilecek hizmetiçi eğitimin niteliği bir kez daha önem kazanmaktadır (Gürşimşek ve diğerleri, 1997). Sonuç olarak bu çalışmanın alanyazına etkili bir hizmetiçi eğitim programının temel özellikleri hakkında önemli katkılarda bulunacağı düşünülmektedir. Ayrıca bu çalışma ilköğretimde görev yapan öğretmenlerin ihtiyaçlarını ve tercihlerini ortaya çıkarmış olup MEB'na önemli bilgiler sunmaktadır. Bunlara ek olarak çalışmadan elde edilen veriler öğretmen yetiştiren kurumlara da mezunlarının ihtiyaç ve

tercihleri hakkında önemli dönütler vermektedir. Bu kapsamda "Öğretmenler ne tür bir hizmetiçi eğitime ihtiyaç duymaktadırlar?" sorusuna yanıt aranmaktadır. Ana problemi destekleyecek alt problemler aşağıda belirtilmiştir:

1. Öğretmenler ne türden hizmetiçi eğitimlere ihtiyaç duymaktadır?
   1.1. Öğretmenler aşağıdaki boyutların her birine göre hizmetiçi eğitime ne kadar ihtiyaç duymaktadır?
      i. Öğretmenlik meslek bilgisi
      ii. Öğretmenlik alan bilgisi
      iii. Eğitimde teknoloji kullanımı
      iv. Ulusal ve uluslararası sınavların tanıtımı
      v. Rehberlik ve özel eğitim
      vi. İletişim ve sosyal becerileri
      vii. Kişisel gelişim
      viii. Sosyal bilinç gelişimi
   1.2. Öğretmenlerin içerik, eğitimciler, zaman ve yer, katılımcılar ve değerlendirme boyutlarına göre hizmetiçi eğitim tercihleri nelerdir?
2. Öğretmenlerin hizmetiçi eğitim ihtiyaçlarını tahmin eden yordayıcılar nelerdir?
   2.1. Öğretmenlerin hizmetiçi eğitim ihtiyaçları ile cinsiyet, mezun oldukları fakülte türü, öğretmenlik konu alanı, görev yaptığı okul türü, istihdam şekli ve öğretmenlik meslek yılı gibi değişkenler arasında istatistiksel olarak anlamlı bir farklılık var mıdır?
   2.2. Öğretmenlerin hizmetiçi eğitim tercihleri ile cinsiyet, mezun oldukları fakülte türü, öğretmenlik konu alanı, görev yaptığı okul türü, istihdam şekli ve öğretmenlik meslek yılı gibi değişkenler arasında istatistiksel olarak anlamlı bir farklılık var mıdır?
   2.3. Öğretmenler daha önce katıldıkları eğitimlerin eğitim içeriği, eğitimciler, eğitim merkezi, organizasyon, katılımcılar ve değerlendirilme boyutları açısından uygunluğunu ve etkililiğini nasıl değerlendirmektedirler?

Yöntem

Araştırma Deseni

Bu çalışma ülke genelini kapsayan bir tarama modeli çalışmasıdır. Nicel araştırma özelliği taşıyan çalışmada veriler araştırmacı tarafından hazırlanan anket formuyla toplanmıştır. Anket formu çalışmanın örneklemini oluşturan ve katılmaya gönüllü olan öğretmenlere gerekli izinler alındıktan sonra uygulanmış; elde edilen veriler SPSS 18 ve MPlus 5.2 istatistik programlarıyla analiz edilmiştir.

Evren ve Örneklem

Çalışmanın evreni öğrencilerle geçirdikleri zaman dikkate alınarak Türkiye'de 1-8'de görev yapan tüm sınıf, matematik, fen ve teknoloji, sosyal bilgiler, Türkçe ve İngilizce öğretmenleri olarak belirlenmiştir. Milli Eğitim İstatistikleri'nin (2011) İstatistiki Bölge Birimleri Sınıflamasına göre belirtilmiş 12 coğrafi bölgeden 26 alt bölgeyi temsilen birer il seçkisiz olarak belirlenmiştir. Belirtilen illerde bulunan ilköğretim okullarının sayısı Milli Eğitim İstatistikleri 2010-2011 verilerinden alınmıştır. Türkiye'de en az sayıda ilköğretim okuluna 40 okul ile Tunceli ili sahiptir. Örneklemimizde bulunan illerdeki toplam devlet ilköğretim okulu sayısı 40'a bölünerek okul sayıları (seçkisiz belirlenen ildeki devlet okulu sayısı/40) belirlenmiştir. Toplam 26 ilden 352 ilköğretim okulunun çalışmaya katılması amaçlanmıştır. Ayrıca her ilde bulunan okulların isimleri, İl Milli Eğitim Müdürlükleri web sayfalarından elde edilerek listelenmiş; listelerden örneklemde belirlenmiş olan okul sayısı kadar okul ismi rastlantısal örnekleme programı yardımı ile seçilmiştir. Her okuldan alanı belirtilmiş 6 farklı branş öğretmeninin gönüllülük esasına dayanılarak çalışmaya katılması ile araştırmada 2112 öğretmene ulaşılması hedeflenmiştir. Çalışmadaki öğretmenlerin 1730'u anketleri doldurmuştur. Verinin geri dönüş oranı % 81,9'dur.

Veri Toplama Aracı

Veri toplama aracının geliştirilmesi aşamasında yapılan alanyazın taramasının ardından madde havuzu oluşturulmuştur. Oluşturulan madde havuzu anket formu haline getirilerek kapsam ve görünüş geçerliliğini sağlamak için konu ile ilgili 6 öğretmen (Matematik, Fen ve Teknoloji, İngilizce, Türkçe, sınıf öğretmenliği alanında görev yapan), Eğitim Programları ve Öğretim anabilim dalında görevli 5 öğretim elemanı, İlköğretim Fen ve Matematik Eğitimi alanında görevli 1 öğretim elemanı ve Eğitim Yönetimi ve Denetimi alanından 1 öğretim elemanının görüşlerine sunulmuştur. Öğretmenler ve öğretim elemanlarının yanı sıra MEB HİEDB'ndan 1, Talim Terbiye Kurulundan 1 ve 2 İlçe Milli Eğitim Müdürü olmak üzere MEB'ndan 4 uzmanın görüşü alınarak anket formu son haline getirilmiştir. Uzman görüşlerine dayanılarak demografik bilgi bölümü 20 maddeden 16 maddeye, hizmetiçi eğitim ihtiyaçları bölümü 72'den 52 maddeye, hizmetiçi eğitimin değerlendirilmesi bölümü 67'den 50 maddeye ve son olarak hizmetiçi eğitim tercihleri bölümü 29'dan 28 maddeye düşürülmüştür. Bazı maddeler birbirini içermesi ve tekrar etmesi nedeniyle elenirken bazı maddeler de alandan uzman kişilerin önerilerine dayanılarak eklenmiştir. Son haline kavuşturulan anket formu ODTÜ Etik Komitesinin onayındangeçirilmiştir. Anket pilot çalışması Konya ilindeki 460 öğretmenle yapılmış; toplanan veri geçerlilik ve güvenirlik testlerine tabi tutulmuş, anket gözden geçirilmiş ve son şekli verilerek saha uygulaması için optik form olarak çoğaltılmıştır. Türkiye geneli yapılan bu uygulama Kasım 2011-Ocak-2012 tarihleri arasında gerçekleştirilmiştir. Veri toplama sürecinde anketlerin dağıtılması ve toplanması aşamasında Eğitimi Araştırma ve Geliştirme Dairesi Başkanlığı'nın desteği alınmıştır.

Verilerin Analizi

Toplanan veri temizleme aşamasından sonra tekrar geçerlilik ve güvenirlik testlerine tabi tutulmuştur. Güvenirlik için her bölümün Cronbach Alpha değerleri hesaplanmış ve değerlerin .70'in üzerinde olduğu belirlenmiştir. Ayrıca açıklayıcı ve doğrulayıcı faktör analizleri ile geçerlilik testleri yapılmıştır. Bu testlerin ardından veri açıklayıcı ve yordayıcı istatistiki yöntemler kullanılarak SPSS 18 ve

Mplus 5.2 programları ile analiz edilmiştir. Sonuçlar ortalama ve standart sapma olarak özetlenirken öğretmenlerin hizmetiçi eğitim ihtiyaçları, tercihleri ve daha önce alınan eğitimlerin değerlendirmeleri ayrıca Tek Yönlü Varyans Analizi ve Yapısal Eşitlik Modellemesi ile açıklanmaktadır. Veri analizine başlamadan önce gerekli sayıltılar analiz edilmiştir.

Sonuçlar

İhtiyaç Duyulan Eğitimler

Bu bölümde *"Öğretmenler ne türden hizmetiçi eğitimlere ihtiyaç duymaktadır?"* araştırma sorusuna yanıt vermek amacıyla ankette öğretmenlere verilen her bir alanla ilgili alt konularda ne derece ihtiyaç duyduklarını belirtmeleri istenmiştir. Veri betimsel istatistik yöntemleri kullanılarak sonuçlar ortalama ve standart sapma cinsinden yorumlanmıştır. Öncelikle 4 olan ölçek aralığı 5'e bölünerek çıkan sonuç (0.80) kullanılarak ölçek yorumlanmak üzere yeni değerlerine dönüştürülmüştür. Buna göre, yeni ölçek 1-1.80 "Hiç ihtiyacım yok," 1.81-2.60 "İhtiyacım yok," 2.61-3.40 "Biraz ihtiyacım var," 3.41-4.20 "İhtiyacım var," ve 4.21- 5.00 "Çok ihtiyacım var" şeklinde yorumlanmıştır.

Öncelikle her alanın altında yer alan alt konulara yönelik verilen yanıtların ortalaması alınarak 8 ana alanın genel puanları elde edilmiştir. Buna göre çalışmaya katılan öğretmenlerin 8 kategoride verilen eğitim ihtiyaçları bölümüne verdiği yanıtlara göre öğretmenlerin biraz olarak ihtiyaç duydukları eğitimler Rehberlik ve Özel Eğitim (*Ort*=3.13, *SS*=.82), Ulusal ve Uluslararası Sınavların Tanıtımı (Ort=2.96, SS=.94), Kişisel Gelişim (Ort=2.79, SS=.84), Öğretmenlik Meslek Bilgisi (Ort=2.63, SS=.75) ve Eğitimde Teknoloji Kullanımı (Ort=2.62, SS=.92) kategorileridir. Öğretmenler diğer kategorilere ise eğitime ihtiyaç duymadıklarını belirtilmişlerdir.

Öğretmenler *öğretmenlik meslek bilgisine* yönelik bu ana kategori altında 10 temel eğitim konusuna yönelik sadece eğitimde yeni yaklaşımlar (*Ort*=2.94, *SS*=1.02), değişen paradigmalar ve eğitim sistemlerini tartışma (*Ort* =3.07, *SS* =1.04), sosyal etkinlik planlama ve uygulama (*Ort*=2.77, *SS*=1.02), and öğretmen adaylarına (stajyer öğrencilere) rehber olma (*Ort*=2.61, *SS*=1.15) konularında biraz olarak eğitime ihtiyaç duyduklarını belirtmişlerdir.

Öğretmenler *öğretmenlik alan bilgisine* yönelik bu ana kategori altında 8 temel eğitim konusuna yönelik sadece öğretmenlik yaptığı alandaki yeni bilgileri öğrenme (*Ort*=2.62, *SS*=1.04), alanıyla ilgili ders materyali/etkinlik geliştirme (*Ort*=2.84, *SS*=1.02), alanıyla ilgili geliştirilen ders materyallerinin kullanımı (*Ort*=2.66, *SS*=1.02) ve eğitim programlarında yapılan yenilikler/değişiklikler hakkında (*Ort*=2.87, *SS*=1.00) biraz olarak eğitime ihtiyaç duyduklarını belirtmişlerdir.

Öğretmenler *eğitimde teknoloji kullanıma* yönelik bu ana kategori altında 8 temel eğitim konusuna yönelik sadece akıllı tahta kullanımı hakkında (*Ort*=3.57, *SS*=1.18) eğitime ihtiyaçları olduğunu, Flash vb programlarla etkin öğretim materyali hazırlama (*Ort*=2.94, *SS*=1.19) ve MS Ofis yazılımları ile etkin öğretim materyali hazırlama hakkında (*Ort*=2.76, *SS*=1.20) biraz olarak eğitime ihtiyaçları olduğunu belirtmişlerdir.

Ulusal ve uluslararası sınavların tanıtımına yönelik olarak PIRLS, TIMSS ve PISA gibi uluslararası sınavların tanıtımı hakkında (*Ort*=3.50, *SS*=1.21) eğitime ihtiyaçları olduğunu; ortaöğretim öğrenci başarılarının belirlenmesi sınavı (ÖBBS) (*Ort*=2.76, *SS*=1.11) ve değişen orta öğretime geçiş sistemi (SBS) hakkında (*Ort*=2.62, *SS*=1.07) biraz miktarda eğitime ihtiyaç duyduklarını belirtmişlerdir.

Öğretmenler *rehberlik ve özel eğitime* yönelik olarak belirtilen konulardaki eğitimlere ihtiyaçları olduğunu belirtirken; *iletişim ve sosyal becerilere* yönelik verilen eğitim konularından hiçbirine ihtiyaç duymadıklarını belirtmişlerdir.

Katılımcılar*kişisel gelişime* yönelik olarak proje hazırlama/yönetimi (*M*=2.97, *SD*=1.11), sağlık bilgisi ve ilkyardım (*M*=2.84, *SD*=1.10), hızlı okuma teknikleri (*M*=2.78, *SD*=1.15) ve sorun çözme teknikleri hakkında (*M*=2.70, *SD*=1.03) biraz olarak eğitime ihtiyaç duyduklarını belirtmişlerdir.

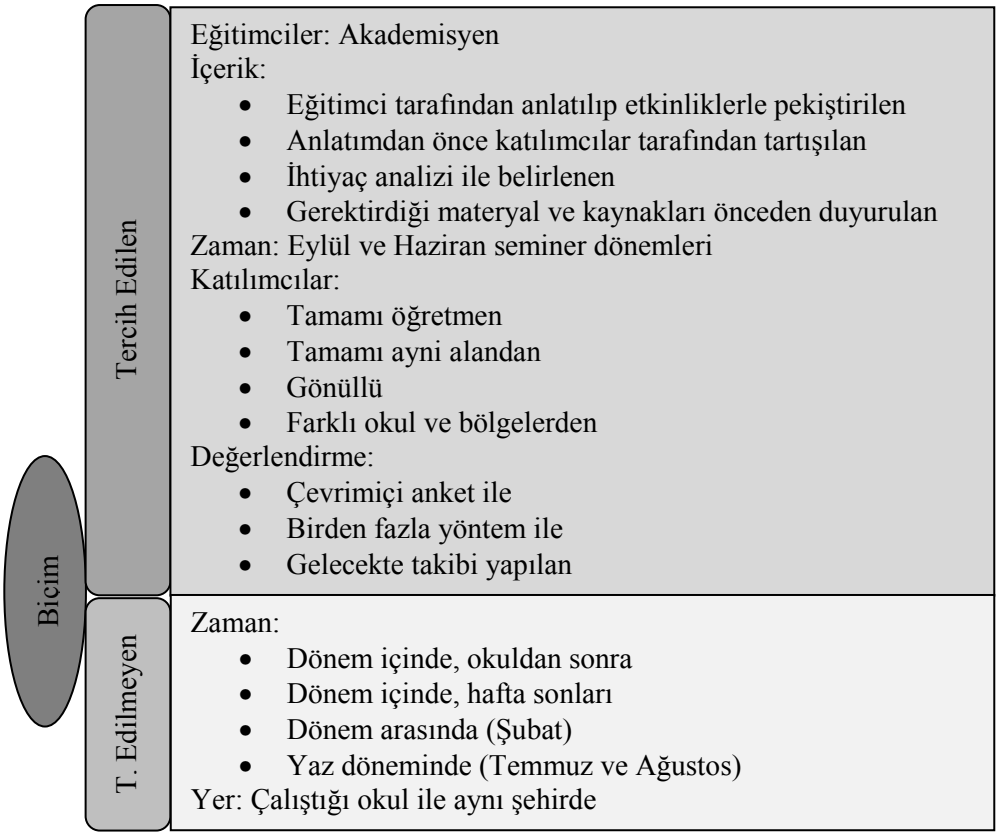
Öğretmenler *sosyal bilinç gelişime* yönelik verilen konular hakkında eğitime ihtiyaç duymadıklarını belirtmişlerdir. İhtiyaç duyulan eğitim konuları Şekil 4.3'de özetlenmiştir.

Şekil 4.3. İhtiyaç duyulan eğitim konuları

Tercih Edilen Hizmetiçi Eğitim Programı Biçimi

Öğretmenlere verilen maddelerin her birini ne ölçüde tercih ettikleri sorulmuştur ve sonuçlar ortalama ve standart sapma cinsinden özetlenmiştir. Öncelikle 4 olan ölçek aralığı yine 5'e bölünerek çıkan sonuç (0.80) kullanılarak ölçek yorumlanmak üzere yeni değerlerine dönüştürülmüştür. Buna göre, yeni ölçek 1-1.80 "Kesinlikle tercih etmem," 1.81-2.60 "Tercih etmem," 2.61-3.40 "Ne tercih ederim ne etmem," 3.41-4.20 "Tercih ederim," ve 4.21- 5.00 "Kesinlikle tercih ederim" şeklinde yorumlanmıştır. Buna göre, öğretmenler, eğitimcilerin akademisyen olmasını (*Ort*=4.33, *SS*=.94) ve katılımcıların eğitime kendi istekleriyle katılmalarını (*Ort*=4.37, *SS*=.84) kesinlikle tercih etmektedirler. Ayrıca öğretmenler, içeriğin eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesini (*Ort*=4.07, *SS*=.91), gerektirdiği materyal ve kaynakların önceden duyurulmasını (*Ort*=4.01, *SS*=.90), ihtiyaç analizi sonucunda belirlenmesini

(*Ort*=4.00, *SS*=1. 09), katılımcılar tarafından tartışılıp sonra eğitimci tarafından anlatılmasını (*Ort*=3.79, *SS*=1. 04), eğitimlerin okul açılmadan (eylül ayı seminer dönemi) (*Ort*=3.80, *SS*=1.34) veya okul kapandıktan sonra (haziran ayı seminer dönemi) (*Ort*=3.64, *SS*=1.52) yapılmasını, katılımcıların tamamının öğretmen olmasını (*Ort*=3.97, *SS*=1.01), aynı branştan olmasını (*Ort*=3.91, *SS*=1.04) ve her birinin farklı okullardan ve bölgelerden gelmesini (*Ort*=3.66, *SS*=1.11), değerlendirmenin çevrimiçi (online) anket ile yapılmasını (*Ort*=3.62, *SS*=1.14), birden fazla yöntemle olmasını (*Ort*=3.59, *SS*=1.12) ve eğitim kazanımlarının daha sonrasında takibinin olmasını (*Ort*=3.50, *SS*=1.13) tercih etmektedirler. Öğretmenler, eğitimlerin ders döneminde ders çıkışlarında (*Ort*=1.98, *SS*=1.28) ve haftasonları (*Ort*=1.90, *SS*=1.26) yapılmasını ise tercih etmemektedirler. Ayrıca, kursların görev yaptıkları ilde olmasını (*Ort*=1.79, *SS*=1.03), ara tatilde (şubat ayı) (*Ort*=1.75, *SS*=1.19) ve yaz tatilinde (temmuz ve ağustos) (*Ort*=1.69, *SS*=1.18) yapılmasını kesinlikle tercih etmemektedirler. Sonuçlar Şekil 4.4'de özetlenmiştir.



Şekil 4.4. Tercih edilen hizmetiçi eğitim biçimi

Son olarak, öğretmenlerin ortalamaları 2.61-3.40 arasında olan hizmetiçi eğitim tercihleri hakkındaki görüşlerini doğru yorumlayabilmek amacıyla nitel veri toplanması gerekmektedir.

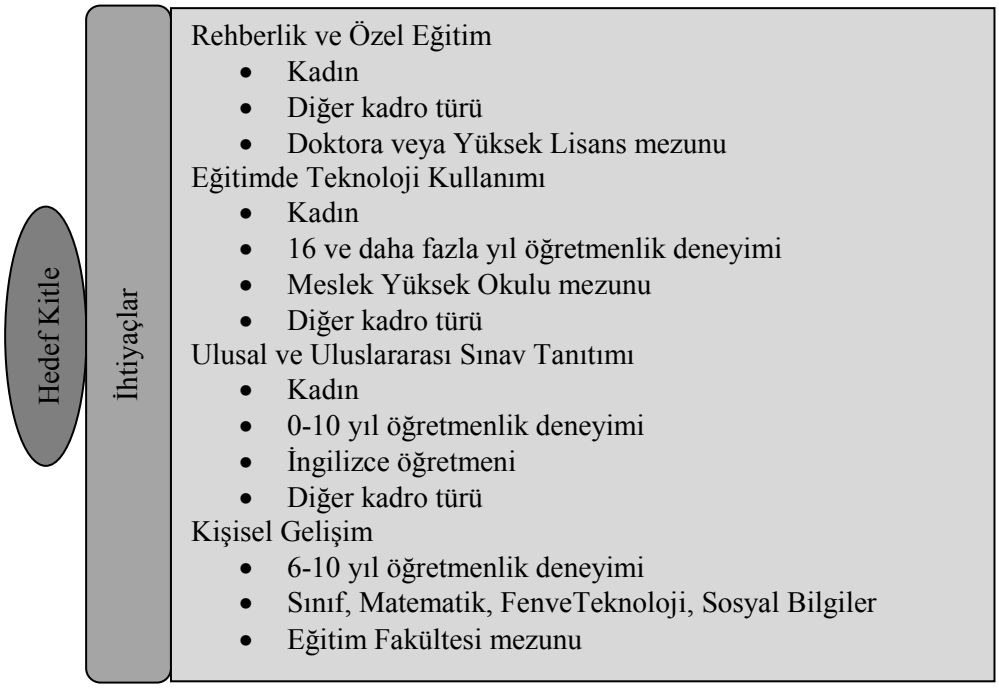
Öğretmenlerin Hizmetiçi Eğitim İhtiyaçlarını Belirleyen Değişkenler

Bu çalışmada öğretmenlerin hizmetiçi eğitim ihtiyaçlarını açıklayan değişkenleri araştırmak amacıyla tek yönlü varyans analizi kullanılmıştır. Her bir değişken için sonuçlar ayrı ayrı incelenmiştir. Tek yönlü varyans analizi sonuçlarına göre öğretmenlerin eğitimde teknoloji kullanımına (Kadın: *Ort*=2.67, *SS*=.88; Erkek: *Ort*=2.55, *SS*=.96; $F(1, 1650)= 6.88$, $p<.05$, $\eta^2=.004$), ulusal ve uluslararası sınavların tanıtımına (Kadın: *Ort*=3.00, *SS*=.92; Erkek: *M*=2.90, *SS*=.97; $F(1, 1634)= 4.79$, $p<.05$, $\eta^2=.003$) ve rehberlik ve özel eğitime yönelik (Kadın: *Ort*=3.17, *SS*=.81; Erkek: *Ort*=3.08, *SS*=.82; $F(1, 1646)= 1.30$, $p<.05$, $\eta^2=.003$) ihtiyaçları *cinsiyete* göre istatistiksel olarak anlamlı bir fark göstermektedir. Bu üç eğitim kategorisi için de kadınlar erkeklere göre daha fazla ihtiyaç belirtmişlerdir. Cinsiyet anlamlı farklılık gösteren ihtiyaçlar üzerinde çok küçük bir etki değerine sahiptir (%1 veya 0'a yakın). Yani cinsiyet eğitim kategorileri üzerinde istatiksel olarak anlamlı bir farklılık gösterse de pratikte anlamlı bir değişken değildir.Öğretmenlerin eğitimde teknoloji kullanımına (Sınıf: *Ort*=2.66, *SS*=.97; Matematik: *Ort*=2.55, *SS*=.91; Fen ve Teknoloji: *Ort*=2.66, *SS*=.92; Türkçe: *Ort*= 2.69, *SS*=.87; İngilizce: *Ort*=2.46, *SS*=.86; Sosyal Bilgiler: *Ort*=2.65, *SS*=.90; $F(5, 1684)= 2.33$, $p<.05$), ulusal ve uluslararası sınavların tanıtımına (Sınıf: *Ort*=2.92, *SS*=1.07; Matematik: *Ort*=2.84, *SS*=.86; Fen ve Teknoloji: *Ort*=2.94, *SS*=.87; Türkçe: *Ort*=3.03, *SS*=.93; İngilizce: *Ort*=3.10, *SS*=.86; Sosyal Bilgiler: *Ort*=2.95, *SS*=.86; $F(5, 1668)= 2.33$, $p<.05$) ve kişisel gelişime yönelik (Sınıf: *Ort*=2.83, *SS*=.86; Matematik: *Ort*=2.91, *SS*=.80; Fen ve Teknoloji: *Ort*=2.80, *SS*=.83; Türkçe: *Ort*=2.74, *SS*=.82; İngilizce: *Ort*=2.53, *SS*=.84; Sosyal Bilgiler: *Ort*=2.90, *SS*=.82; $F(5, 1684)= 2.77$, $p<.05$) ihtiyaçları öğretmenlerin *branşlarına* göre farklılık göstermektedir. Branş bu üç eğitim kategorisi üzerinde küçük etki değerlerine sahiptir (sırasıyla %1, %1 ve %2). İngilizce öğretmenleri uluslararası sınavların tanıtımına yönelik hizmetiçi eğitime Matematik öğretmenlerine göre

daha fazla ihtiyaç belirtirken; Sınıf, Matematik, Fen ve Teknoloji ve Sosyal Bilgiler öğretmenleri kişisel gelişime yönelik eğitime İngilizce öğretmenlerine göre daha fazla ihtiyaç duyduklarını belirtmişlerdir. Çalışmaya katılan öğretmenlerin eğitimde teknoloji kullanımına (0-5 yıl: *Ort*=2.53, *SS*=.89; 6-10 yıl: *Ort*=2.56, *SS*=.88; 11-15 yıl: *Ort*=2.61, *SS*=.92; 16 veya daha fazla yıl: *Ort*=2.97, *SS*=.97; $F(3, 1685)= 15.97$, $p<.05$), ulusal ve uluslararası sınavların tanıtımına (0-5 yıl: *Ort*=3.04, *SS*=.88; 6-10 yıl: *Ort*=2.99, *SS*=.97; 11-15 yıl: *Ort*=2.87, *SS*=.98; 16 veya daha fazla yıl: *Ort*=2.78, *SS*=.97; $F(3, 1668)= 5.60$, $p<.05$), rehberlik ve özel eğitime (0-5 yıl: *Ort*=3.14, *SS*=.76; 6-10 yıl: *Ort*=3.22, *SS*=.81; 11-15 yıl: *Ort*=3.10, *SS*=.91; 16 veya daha fazla yıl: *Ort*=2.98, *SS*=.87; $F(3, 1682)= 4.72$, $p<.05$) ve kişisel gelişime yönelik (0-5 yıl: *Ort*=2.78, *SS*=.81; 6-10 yıl: *Ort*=2.87, *SD*=.84; 11-15 yıl: *Ort*=2.80, *SS*=.87; 16 veya daha fazla yıl: *Ort*=2.68, *SS*=.88; $F(3, 1686)= 2.91$, $p<.05$) ihtiyaçları *öğretmenlik meslek deneyimine* göre anlamlı bir farklılık göstermektedir. Bu farklılıklar sırayla orta ve küçük etki değerlerine sahiptir (%3, %1, %1 ve %1). 16 veya daha fazla yıl öğretmenlik tecrübesi olanlar eğitimde teknoloji kullanımına yönelik daha fazla ihtiyaç belirtmişlerdir. Öğretmenlik tecrübesi 0-5 yıl ve 6-10 arasında olanlar ise öğretmenlik tecrübesi 16 veya daha fazla yıl olanlara göre ulusal ve uluslararası sınavların tanıtımına ve rehberlik ve özel eğitime yönelik daha fazla ihtiyaç belirtirken; 6-10 arasında tecrübesi olanlaar kişisel gelişime yönelik eğitime 16 veya daha fazla tecrübesi olanlara göre daha fazla ihtiyaç duymaktadırlar. *Mezun olunan fakülte türü*ne yönelik ihtiyaçlar kişisel gelişim (Eğitim Fakültesi: *Ort*=2.82, *SS*=.83; Diğer: *Ort*= 2.66, *SS*=.87; $F(1, 1710)= 8.99$, $p<.05$) eğitim kategorisinde anlamlı bir farklılık göstermektedir. Mezun olunan fakülte türü bu ihtiyaç üzerinde küçük bir etki değerine sahiptir (%1). Buna göre eğitim fakültesinden mezun olanlar kişisel gelişime yönelik eğitimlere daha fazla ihtiyaç duyduklarını belirtmişlerdir. *Eğitim düzeyi*, eğitimde teknoloji kullanımına (Ön Lisans: *Ort*=2.94, *SS*=1.07; Lisans: *Ort*=2.60, *SS*=.91; Lisansüstü: *Ort*=2.47, *SS*=.87; $F(2, 1682)= 7.51$, $p<.05$) ve rehberlik ve özel eğitime yönelik (Ön Lisans: *Ort*=3.03, *SS*=.93; Lisans: *Ort*=3.13, *SS*=.81; Lisansüstü: *Ort*=3.35, *SS*=.78; $F(2, 1678)=3.51$, $p<.05$, $\eta^2=.004$) ihtiyaçlar üzerinde anlamlı bir farklılık göstermektedir. Buna göre önlisans mezunları eğitimde teknoloji kullanımına yönelik eğitime diğer gruplara göre daha

fazla ihtiyaç belirtmişlerdir. Diğer taraftan lisansüstü mezunları da rehberlik ve özel eğitime yönelik eğitime diğer gruplara göre daha fazla ihtiyaç duyduklarını rapor etmişlerdir. Fakat eğitim düzeyinin ihtiyaçlar üzerindeki etki değeri çok küçüktür (%1 ve 0'a yakın). Araştırma sonuçlarına göre öğretmenlerin görev yaptıkları *okul türünün* öğretmen ihtiyaçları üzerinde istatistiksel olarak anlamlı bir etkisi gözlenmemiştir.

Son olarak öğretmenlerin eğitimde teknoloji kullanımına (Kadrolu: *Ort*=2.60, *SS*=.91; Diğer: *Ort*=2.74, *SS*=.96; $F(1, 1708)=3.98$, $p<.05$, $\eta^2=.002$)ve ulusal ve uluslararası sınavların tanıtımına yönelik (Kadrolu: *Ort*=2.94, *SS*=.94; Diğer: *Ort*=3.14, *SS*=.90; $F(1, 1692)=7.46$, $p<.05$, $\eta^2=.004$) eğitim ihtiyaçları *kadro türüne* göre farklılık göstermektedir. Buna göre diğer kadro türlerinde görev yapan öğretmenler iki eğitim kategorisinde de eğitime daha fazla ihtiyaçları olduğunu belirtmişlerdir. Fakat eğitim düzeyinin ihtiyaçlar üzerindeki etki değeri çok küçüktür (%1 ve 0'a yakın). Bu sonuçlar Şekil 4.5'de özetlenmiştir.



*Şekil 4.5.*Öğretmen ihtiyaçlarına gore eğitimlerin hedef kitlesi

Öğretmenlerin Hizmetiçi Eğitim Tercihlerini Belirleyen Değişkenler

Çalışmada öğretmen tercihlerini belirleyen değişkenleri araştırmak amacıyla tek yönlü varyans analizi kullanılmıştır.Sonuçlar Şekil 4.6'da özetlenmiştir.

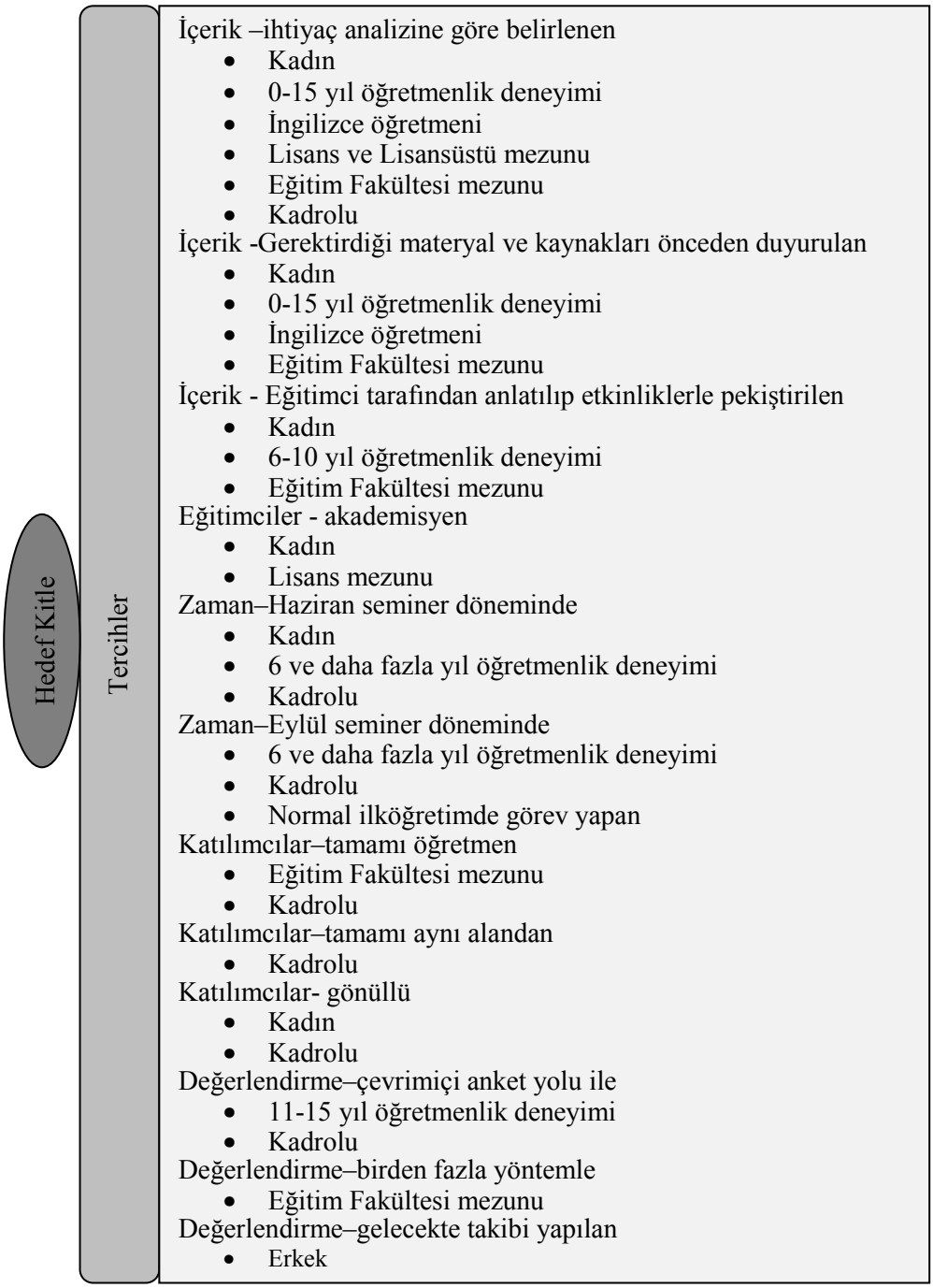


*Figure 4.6.*Öğretmen tercihlerine göre eğitimlerin hedef kitlesi

Cinsiyet öğretmenlerin içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi (Kadın: *Ort*=4.08, *SS*=1.01; Erkek: *Ort*=3.90, *SS*=1.13; *F*(1, 1622)=11.76, *p*<.05)*,* gerektirdiği materyal ve kaynakların önceden duyurulması (Kadın: *Ort*=4.15, *SS*=.78; Erkek: *Ort*=3.84, *SS*=.98; *F*(1, 1621)=49.38, *p*<.05), eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesi (Kadın: *Ort*=4.18, *SS*=.84; Erkek: *Ort*=3.95, *SS*=.96; *F*(1, 1625)=26.56, *p*<.05), eğitimcilerin akademisyen olması (Kadın: *Ort*=4.37, *SS*=.89; Erkek: *Ort*=3.27, *SS*=1.00; *F*(1, 1622)=4.47, *p*<.05), eğitimlerin okul kapandıktan sonra (haziran ayı seminer dönemi) yapılması (Kadın: *Ort*=3.74, *SS*=1.48; Erkek: *Ort*=3.55, *SS*=1.55; *F*(1, 1625)=6.24, *p*<.05), katılımcıların kendi isteğiyle eğitime katılması (Kadın: *Ort*=4.42, *SS*=.75; Erkek: *Ort*=4.32, *SS*=.93; *F*(1, 1619)=6.47, *p*<.05) ve eğitim kazanımlarının daha sonrasında takibinin olması (Kadın: *Ort*=3.43, *SS*=1.14; Erkek: *Ort*=3.58, *SS*=1.13; *F*(1, 1620)=4.49, *p*<.05) tercihleri üzerinde anlamlı bir değişiklik göstermektedir. Fakat cinsiyetin tercihler üzerindeki etki değeri orta, küçük ve çok küçüktür (%1, %3, %2 ve 0'a yakın). Sonuçlar kadınların eğitim kazanımlarının daha sonrasında takibinin olması dışındaki tüm tercihlerde daha fazla tercih belittiğini göstermiştir.

Branş öğretmenlerin içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi (Sınıf: *Ort*=4.03, *SS*=.99; Matematik: *Ort*=4.03, *SS*=1.10; Fen ve Teknoloji: *Ort*=3.86, *SS*=1.52; Türkçe: *Ort*=3.96, *SS*=1.16; İngilizce: *Ort*= 4.19, *SS*=1.05; Sosyal Bilgiler: *Ort*= 3.94, *SS*=1.13; *F*(5, 1655)=2.58, *p*<.05) ve gerektirdiği materyal ve kaynakların önceden duyurulması (Sınıf: *Ort*=4.02, *SS*=.87; Matematik: *Ort*=4.00, *SS*=.92; Fen ve Teknoloji: *Ort*=3.87, *SS*=.90; Türkçe: *Ort*=4.02, *SS*=.90; İngilizce: *Ort*=4.15, *SS*=.88; Sosyal Bilgiler: *Ort*=3.97, *SS*=.96; *F*(5, 1656)=2.46, *p*<.05) tercihleri üzerinde anlamlı bir değişiklik göstermektedir. Fakat branşın tercihler üzerindeki etki değeri küçüktür (%1 ve %1). Sonuçlar İngilizce öğretmenlerinin Fen ve Teknoloji öğretmenlerine göre daha fazla tercih belittiğini göstermiştir.

Öğretmenlik deneyimi öğretmenlerin içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi (0-5 yıl: *Ort*=4.10, *SS*=1.05; 6-10 yıl: *Ort*=4.08, *SS*=1.01;

11-15 yıl: *Ort*=3.95, *SS*=1.10; 16 ve daha fazla yıl: *Ort*=3.63, *SS*=1.21; *F*(3, 1653)=12.93, *p*<.05), gerektirdiği materyal ve kaynakların önceden duyurulması(0-5 yıl: *Ort*=4.04, *SS*=.88; 6-10 yıl: *Ort*=4.07, *SS*=.87; 11-15 yıl: *Ort*=4.02, *SS*=.93; 16 ve daha fazla yıl: *Ort*=3.79, *SS*=.95; *F*(3, 1656)=6.00, *p*<.05), eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesi (0-5 yıl: *Ort*=4.10, *SS*=.92; 6-10 yıl: *Ort*=4.17, *SS*=.86; 11-15 yıl: *Ort*=3.98, *SS*=.95; 16 ve daha fazla yıl: *Ort*=3.92, *SS*=.96; *F*(3, 1657)=4.93, *p*<.05), eğitimlerin okul kapandıktan sonra (haziran ayı seminer dönemi) yapılması (0-5 yıl: *Ort*=3.28, *SS*=1.60; 6-10 yıl: *Ort*=3.90, *SS*=1.41; 11-15 yıl: *Ort*=3.86, *SS*=1.43; 16 ve daha fazla yıl: *Ort*=3.96, *SS*=1.35; *F*(3, 1658)=24.09, *p*<.05), eğitimlerin okul açılmadan (eylül ayı seminer dönemi) yapılması (0-5 yıl: *Ort*=3.56, *SS*=1.43; 6-10 yıl: *Ort*=4.00, *SS*=1.24; 11-15 yıl: *Ort*=4.02, *SS*=1.23; 16 ve daha fazla yıl: *Ort*=3.89, *SS*=1.30; *F*(3, 1651)=13.30, *p*<.05) ve değerlendirmenin çevrimiçi anket ile yapılması (0-5 yıl: *Ort*=3.63, *SS*=1.13; 6-10 yıl: *Ort*=3.64, *SS*=1.11; 11-15 yıl: *Ort*=3.71, *SS*=1.11; 16 ve daha fazla yıl: *Ort*=3.43, *SS*=1.14; *F*(3, 1652)=2.87, *p*<.05) tercihleri üzerinde anlamlı bir değişiklik göstermektedir. Öğretmenlik deneyimi öğretmen tercihleri üzerinde orta ve küçük etki değerlerine sahiptir (%2, %1, %1, %4, %2, %1 ve %1). Sonuçlara göre 0-5 yıl, 6-10 yıl ve 11-15 yıl arası öğretmenlik tercübesi olanlar içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesini ve gerektirdiği materyal ve kaynakların önceden duyurulmasını 16 ve daha fazla yıl tebrübeye sahip olanlara göre daha fazla tercih etmektedirler. 6-10 yıl tecrübesi olanlar içeriğin eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesini 11-15 ve 16 ve daha fazla yıl tecrübesi olanlara göre; 6-10 yıl, 11-15 yıl ve 16 ve daha fazla yıl tecrübesi olanlar eğitimlerin okul kapandıktan sonra (haziran ayı seminer dönemi) veya eğitimlerin okul açılmadan (eylül ayı seminer dönemi) yapılmasını 0-5 yıl tecrübesi olanlara göre; 11-15 yıl tecrübesi olanlar değerlendirmenin çevrimiçi anket ile yapılmasını 16 ve daha fazla yıl tecrübesi olanlara göre daha fazla tercih etmektedirler.

Mezun olunan fakülte türü öğretmenlerin içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi (Eğitim Fakültesi: *Ort*=4.04, *SS*=1.08; Diğer: *Ort*=4.84, *SS*=1.12; *F*(1, 1681)=8.65, *p*<.05), gerektirdiği materyal ve kaynakların önceden

duyurulması (Eğitim Fakültesi: *Ort*=4.03, *SS*=.88; Diğer: *Ort*=3.91, *SS*=.95; *F*(1, 1681)=5.14, *p*<.05)*,* içeriğin eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesi (Eğitim Fakültesi: *Ort*=4.09, *SS*=.90; Diğer: *Ort*=3.98, *SS*=.95; *F*(1, 1683)=4.02, *p*<.05)*,* katılımcıların tamamının öğretmen olması(Eğitim Fakültesi: *Ort*=3.99, *SS*=.99; Diğer: *Ort*=3.85, *SS*=1.06; *F*(1, 1680)=5.46, *p*<.05) ve değerlendirmenin birden fazla yöntemle yapılması(Eğitim Fakültesi: *Ort*=3.62, *SS*=1.10; Diğer: *Ort*=3.43, *SS*=1.18; *F*(1, 1679)=7.84, *p*<.05) tercihleri üzerinde anlamlı bir değişiklik göstermektedir. Fakülte türü öğretmen tercihleri üzerinde küçük veya çok küçük etki değerlerine sahiptir (%1, 0'a yakın, 0'a yakın ve %1). Sonuçlara göre, eğitim fakültesi mezunları içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi dışındaki tüm tercihlerde daha fazla tercih belirmişlerdir.

Eğitim düzeyi öğretmenlerin içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi (Önlisans: *Ort*=3.59, *SS*=1.22; Lisans: *Ort*=4.02, *SS*=1.07; Lisansüstü: *Ort*=4.15, *SS*=.98; *F*(2, 1652)=7.89, *p*<.05)ve eğitimcilerin akademisyen olması (Önlisans: *Ort*=4.04, *SS*=1.06; Lisans: *Ort*=4.34, *SS*=.94; Lisansüstü: *Ort*=4.32, *SS*=.92; *F*(2, 1657)=4.59, *p*<.05) tercihleri üzerinde anlamlı bir değişiklik göstermektedir. Eğitim düzeyi öğretmen tercihleri üzerinde küçük etki değerlerine sahiptir (%1 ve %1). Sonuçlara göre, lisans ve lisansüstü eğitim düzeyine sahip olanlar bu iki tercih için de daha fazla tercih belirtmişlerdir.

Görev yapılan okul türü öğretmenlerin eğitimlerin okul açılmadan (eylül ayı seminer dönemi) yapılması (Normal İlköğretim: *Ort*=3.81, *SS*=1.34; Diğer: *Ort*=3.31, *SS*=1.57; *F*(1, 1670)=4.469, *p*<.05) tercihi üzerinde anlamlı bir değişiklik göstermektedir. Buna göre normal ilköğretim okullarında görev yapanlar bunu diğer okullarda görev yapanlara göre daha fazla tercih etmektedirler. Fakat bu değişkenin bu tercih üzerindeki etki düzeyi çok küçüktür.

Kadro türü öğretmenlerin içeriğin öğretmen ihtiyaçlarının analizi sonucunda belirlenmesi (Kadrolu: *Ort*=4.03, *SS*=1.07; Diğer: *Ort*=3.80, *SS*=1.17; *F*(1, 1781)=7.04, *p*<.05)*,* eğitimlerin okul kapandıktan sonra (haziran ayı seminer dönemi) yapılması (Kadrolu: *Ort*=3.68, *SS*=1.51; Diğer: *Ort*=3.29, *SS*=1.54; *F*(1,

1783)=10.42, p<.05), eğitimlerin okul açılmadan (eylül ayı seminer dönemi) yapılması (Kadrolu: *Ort*=3.85, *SS*=1.33; Diğer: *Ort*=3.37, *SS*=1.40; F(1, 1776)=20.37, p<.05), katılımcıların tamamının öğretmen olması (Kadrolu: *Ort*=3.99, *SS*=1.00; Diğer: *Ort*=3.74, *SS*=1.04; F(1, 1780)=10.59, p<.05), tamamının aynı branştan olması (Kadrolu: *Ort*=3.92, *SS*=1.03; Diğer: *Ort*=3.08, *SS*=1.54; F(1, 1786)=4.57, p<.05), kendi istekleriyle eğitime katılması (Kadrolu: *Ort*=4.40, *SS*=.82; Diğer: *Ort*=4.14, *SS*=.96; F(1, 1778)=15.80, p<.05)ve değerlendirmenin çevrimiçi anket yoluyla yapılması (Kadrolu: *Ort*=3.64, *SS*=1.13; Diğer: *Ort*=3.43, *SS*=1.23; F(1, 1778)=5.48, p<.05) tercihleri üzerinde anlamlı bir değişiklik göstermektedir. Sonuçlara göre kadrolu öğretmenler tüm tercihler için daha fazla istek belirtmişlerdir. Fakat bu değişkenin etki değeri küçük veya çok küçüktür (0'a yakın, %1, %1, %1, %1 ve 0'a yakın).

Daha Önce Alınan Eğitimler Hakkındaki Öğretmen Görüşleri

Bu bölümde öğretmenlerin daha önce katıldıkları eğitimler hakkında verilen görüşleri değerlendirmeleri istenmiştir. Veri betimsel istatistik yöntemleri kullanılarak sonuçlar ortalama ve standart sapma cinsinden yorumlanmıştır. Öncelikle 4 olan ölçek aralığı 5'e bölünerek çıkan sonuç (0.80) kullanılarak ölçek yorumlanmak üzere yeni değerlerine dönüştürülmüştür. Buna göre, yeni ölçek 1-1.80 "Hiçbiri için geçerli değil," 1.81-2.60 "Az bir kısmı için geçerli," 2.61-3.40 "Yarısı için geçerli," 3.41-4.20 "Çoğu için geçerli," ve 4.21- 5.00 "Tamamı için geçerli" şeklinde yorumlanmıştır.

Eğitimlerdeki Katılımcılar: Öğretmenlerin katıldıkları eğitimlerin çoğunda katılımcıların tamamı öğretmendir (*Ort*=4.13, *SS*=1.11) ve eğitim düzeyleri yaklaşık olarak birbirine denktir (*Ort*=3.82, *SS*=1.01); yarısında ise eğitimlere yönelik ilgileri yüksektir (*Ort*=3.24, *SS*=1.01), eğitim sırasında aktiflerdir (*Ort*=3.01, *SS*=1.05) ve aynı branştandırlar (*Ort*=2.66, *SS*=1.08).

Eğitim İçeriği: Öğretmenlerin katıldıkları eğitimlerin çoğunda içerik anlaşılırdır (*Ort*=3.56, *SS*=.99); yarısında ise günceldir (*Ort*=3.24, *SS*=1.06), mesleki olarak

bir katkı sağlamıştır (*Ort*=3.11, *SS*=1.05), yoğunluğu kabul edilebilir düzeydedir (*Ort*=3.11, *SS*=.96), teorik ihtiyaçlarını karşılamışlardır (*Ort*=3.09, *SS*=1.05), gerçek sınıf içi durumlarıyla örneklendirilmiştir (*Ort*=3.00, *SS*=1.05), konuya olan ilgi ve heveslerini arttırmıştır (*Ort*=2.93, *SS*=1.07), öğretmenliğin yanı sıra kişisel olarak da bir fayda sağlamışlardır (*Ort*=2.83, *SS*=1.14) ve öğretmenlerin uygulama düzeyinde ihtiyaçlarını karşılamışlardır (*Ort*=2.73, *SS*=1.03).

Eğitimciler: Verilen tüm ifadeler öğretmenlerin katıldıkları eğitimlerin yarısı için geçerlidir.

Organizasyon: Öğretmenlerin katıldıkları eğitimlerin çoğunda katılım duyurusu zamanında yapılmıştır (*Ort*=3.42, *SS*=1.15); yarısında yapıldığı yerler (semt vb) uygundur (*Ort*=3.25, *SS*=1.14), eğitimler sırasında yapılan duyurular/ yönlendirmeler yeterlidir (*Ort*=3.12, *SS*=1.06), kursların yapıldığı tarihler uygundur (*Ort*=3.05, *SS*=1.16) ve kurslar öncesi yapılan bilgilendirme/ yönlendirme yeterlidir (*Ort*=2.91, *SS*=1.12); az bir kısmında ise defter, kalem, bilgisayar gibi gerekli ihtiyaçlar karşılanmıştır (*Ort*=2.49, *SS*=1.24).

*Eğitim Merkezleri:*Öğretmenlerin katıldıkları eğitimlerin yarısında salonlar aydınlatma (*Ort*=3.18, *SS*=1.12) ve genişlik (*Ort*=3.17, *SS*=1.13) bakımından öğrenmeye uygundur, kordinatörlerin sorunlara yaklaşımı uygundur (*Ort*=3.08, *SS*=1.02) ve eğitimciler eğitimlerin etkili yürütülmesini sağlamışlardır (*Ort*=3.04, *SS*=1.02), salonlar teknik donanım (*Ort*=2.91, *SS*=1.08) ve sıcaklık (*Ort*=2.82, *SS*=1.19) bakımından yeterlidir; eğitimlerin hiçbirinde kurslar sırasında sunulan sunulan yiyecek ve içecek ikramları yeterli değildir (*Ort*=1.91, *SS*=1.13).

*Değerlendirme:*Verilen tüm ifadeler öğretmenlerin katıldıkları eğitimlerin yarısı için geçerlidir.

Yapısal Eşitlik Modeli

Öğretmenlerin genel olarak hizmetiçi eğitim ihtiyaçlarını yordayan değişkenleri belirlemek amacıyla Yapısal Eşitlik Modeli (YEM) kullanılmıştır. YEM analizinin temel amacı duygu, zeka, güdü, tutum gibi gizil değişkenlerin bir ya da daha fazla gözlenen değişkenler arasında eş zamanlı olarak birbiriyle olan bağımlılık örüntüsünü açıklamaktır. Bu amaçla Mplus 5.2 programı kullanarak hizmetiçi eğitim ihtiyaç modeli test edilmiştir. YEM değişkenler arasındaki dolaylı ilişkileri de gösterdiğinden (Kline, 2004), Çoklu Regresyon analizi yerine tercih edilmektedir.

YEM analizinden önce öğretmenlerin hizmetiçi eğitim ihtiyaçlarının e daha önceki eğitimler hakkındaki görüşlerinin ortalama değeri hesaplanmıştır. Ayrıca gerekli sayıltılar (örneklem büyüklüğü, normallik ve multicollinearity) incelendikten sonra analize geçilmiştir.Öncelikle araştırmanın ölçüm modeline (Hizmetiçi eğitim ihtiyaçları) doğrulayıcı faktör analizi yapılmıştır. Faktör yapılarının teorik modeldeki yapıya uygun olup olmadığı test edilmiş ve uyum gösterdiği tespit edilmiştir (Ki-kare değeri; 366.28 (df=19, p<.05), CFI değeri; .95, RMSEA değeri; .09 ve SRMR değeri; .03). Buna göre Hizmetiçi eğitim ihtiyaçları ölçüm modeli teorik modeli ile uyumludur.

Doğrulayıcı faktör analizinin ardından tüm modelin uyum testi yapılmıştır. Çalışmada ki-kare değeri 1511.55 (df=135, p<.05) bulunmuştur. Modelin uyumunu değerlendirmek için diğer uyum iyiliği indexleri de hesaplanmıştır. Buna göre; CFI (Karşılaştırmalı uyum indeksi) değerinin .84, RMSEA (Kök ortalama kare yaklaşım hatası) değerinin .07 ve SRMR değerinin .05 olduğu tespit edilmiştir. CFI değerinin .90 dan büyük olması genellikle modelin kabul edilebilir olduğunu göstermektedir (Smith ve McMillan, 2001). RMSEA değeri için .01, .05 ve .08 değerleri sırasıyla mükemmel, iyi ve kötü uyum değerlerini göstermektedir (MacCallum, Browne ve Sugawara, 1996). Buna göre modelin kabul edilebilir düzeyde olmadığı görülmektedir.

Tartışma

İhtiyaç Duyulan Hizmetiçi Eğitimlerin İçeriği ve Biçimi

Bu çalışmanın öncelikli amacı öğretmenlerin ihtiyaç duyduğu eğitimlerin konularını belirlemektir. Sonuçlara göre, Rehberlik ve Özel Eğitim Danışma, Ulusal ve Uluslararası Sınavların Tanıtımı, Kişisel Gelişim, *Öğretmenlik Meslek Bilgisi ve Eğitimde Teknoloji Kullanımı* konularında biraz eğitime ihtiyaç duyduklarını belirtirken diğer konularda eğitime ihtiyaçları olmadığını belirtmişlerdir. Eğitim kategorileri teker teker incelendiğinde *öğretmenler özel yetenekli, öğrenme güçlüğü çeken vepsikolojik desteğe ihtiyaç olan öğrencilerin eğitimi, eğitim koçuğu, çalışsan ve risk altındaki öğrencileirn eğitimi, eğitim kurumlarında şiddeti ve suçu önleme, eğitimde bireysel farklılıklar, PIRLS, TIMSS ve PISA sınavlarının tanıtımı, OBBS sınavının tanıtımı, orta öğretime geçiş sistemi (SBS), yabancı dil öğrenimi, proje planlama/yönetimi, ilk yardım ve sağlık bilgisi, hızlı okuma teknikleri, problem çözme yöntemleri, değişen paradigmalar ve eğitim sistemleri, eğitimde yeni yaklaşımlar, sosyal etkinlik planlama, öğretmen adaylarına rehber olma, akıllı tahta kullanımı, Flash ve vb programlarla etkili öğretim materyali hazırlama, MS Ofis programları ile etkili öğretim materyali hazırlama, program reformları, alanıyla ilgili etkili öğrenme materyali geliştirme, alanıyla ilgili materyallerin kullanımı ve alanındaki yeni konuları öğrenme* hakkında biraz eğitime ihtiyaç duyduklarını belirtmişlerdir. Diğer konularda ise eğitime ihtiyaç duymadıklarını belirtmişlerdir. Bu çalışmada en yüksek ortalama değerine sahip olan eğitim kategorisi *Rehberlik ve Özel Eğitim*dir. Bu bulgu OECD TALIS (2010) raporu ile benzerlik gösterse de bu çalışmada çıkan sonuçların genel olarak düşük olduğunu hatırlatmakta yarar vardır. Guskey (2003) yaptığı alanyazın taramasında, çalışmaların çoğunda eğitim reformlarına yönelik ihtiyaçların ön plana çıktığını belirtmiştir. Son 20 yılda Türk eğitim sistemi birçok reformla karşılaşmıştır (Grossman ve Sands, 2008) buna rağmen öğretmenler bu konuda dahi biraz eğitime ihtiyaçları olduğunu belirtmişlerdir. Eğer orta öğretime geçiş sınavları ilköğretim programları için değerlendirmede bir boyut olarak kabul

ediliyorsa sınavlardaki düşük fen ve matematik puanları gözönünde bulundurulmalı ve niçin öğretmenlerin yeni programların uygulaması, değerlendirilmesi gibi konularda eğitime ihtiyaç duymadıklarını belirttikleri sorgulanmalıdır. Alanyazında birçok ülkede yapılan benzer araştırmalar öğretmenlerin çok çeşitli konularda hizmtiçi eğitime ihtiyaç duyduklarını göstermektedir (EU, 2007; Fok ve diğerleri, Garton ve Chang, 1997; 2005; Karagiorgi ve Symeou, 2007; Wray, 1989). Birçok gelişmiş ve gelişmekte olan ülkelerde öğretmenler birçok konuda eğitime ihtiyaçları olduğunu belirtirken, ülkemizde elde ettiğimiz düşük ortalama değerlerinin öğretmenlerin bu konularda kendilerini yeterli gördüklerinden mi kaynaklanıp kaynaklanmadığını ve bu sonuçların altında yatan diğer nedenleri ortaya çıkarmak amacıyla nitel araştırmalar yapılmalıdır.

İkinci amaç olarak araştırma öğretmenlerin tercih ettiği eğitim programının biçimini ortaya çıkarmayı hedeflemekteydi. Çalışma sonuçlarına göre öğretmenler, eğitimcilerin akademisyen olmasını ve eğitimlere gönüllü katılımı kesinlikle tercih etmektedirler. Ayrıca, içeriğin eğitimciler tarafından anlatıldıktan sonra etkinliklerle desteklenmesini, katılımcılar tarafından tartışıldıktan sonra eğitimci tarafından anlatılmasını, gerekli materyal ve kaynakların önceden duyurulmasını, içeriğin ihtiyaç analizinden sonra belirlenmesini, eğitimlerin Eylül veya Haziran ayı seminer dönemlerinde yapılmasını, katılımcıların tamamının öğretmen, aynı branştan ve farklı okul ya da bölgelerden gelmelerini, değerlendirmenin çevrimiçi anket yoluyla ve çoklu yöntemle yapılarak gelecekte takibinin olmasını tercih etmektedirler.

Öncelikle hizmetiçi eğitimlerde gönüllülük birçok çalışmada da belirtildiği gibi olumlu eğitim çıktıları ile sonuçlanmaktadır (Desimone ve diğerleri, 2003; Supovitz ve Zeif, 2000). Ayrıca Theis (1981) yaptığı taramada alanyazındaki ihtiyaçları sorgulayan çalışmaların çoğu gönüllü katılan öğretmenlerle yapılmıştır. Abdal-Haqq'a (1995) göre kaliteli bir hizmetiçi eğitim yapılandırmacı yaklaşımları desteklemelidir. Bu çalışmadaki öğretmenler, içeriğin eğitimci tarafından anlatıldıktan sonra etkinliklerle pekiştirilmesini ve içeriğin katılımcılar tarafından

tartışıldıktan sonra eğitimci tarafından anlatılmasını tercih etmişlerdir. Bu tercihler yapılandırmacı yaklaşımların da benimsediği öğretmenlerin etkin bir şekilde derse katılımını gerektirmektedir. Ayrıca Vukelich ve Wrenn (1999) etkili bir hizmetiçi eğitimin öğretmen ihtiyaçlarına dayanılarak yapılacağını savunmaktadırlar. Öğretmenlerin de tercih ettiği gibi Birman ve diğerleri (2000) ve Borko (2004) eğitimlerdeki öğretmenlerin aynı branştan ve mümkünse aynı sınıf düzeyinden olmalarını desteklemektedir. Bu araştırmadaki katılımcıların da tercih ettiği gibi Linn ve diğerleri (2010) ve Abdal-Haqq (1995) kaliteli bir hizmetiçi eğitimde mutlaka değerlendirme ve geri bildirim boyutlarının olmasını savunmaktadırlar.

Hizmetiçi Eğitimlerin Hedef Kitlesi ve Daha Önce Alınan Eğitimler

Çalışma sonuçlarına göre genel olarak öğretmen ihtiyaç ve tercihlerinin öğretmen özelliklerine göre istatistiksel olarak anlamlı farklılık göstermediği gözlenmiştir. Varolan bazı anlamlı farklılıklar ise küçük veya çok küçük etki değerlerine sahiptir. Çok küçük etki değeri ise pratikte bir anlam ifade etmemektedir. Bu sonuçlar alanyazın ile uyum göstermemektedir. Alanyazında öğretmenlerin ihtiyaç ve tercihleri cinsiyete (Yuen ve Ma, 2002), öğretmenlik deneyimine (Ball ve Cohen, l999; Brantner, 1964; Edy, 1969; Featherstone, 1993; Griffin, 1987; Johnson ve Kardos, 2002; Marshall ve McDavid, 1993; Moyer ve Husman, 2000; Ruhland ve Bremer, 2002; Shann, 1998), branşa (Brantner, 1964), okul türüne (Abel ve Sewell, 1999; Farber, 1984; Rottier, Kelly, & Tomhave, 1983) ve eğitim düzeyine (Brantner, 1964) göre farklılık göstermektedir.

Öte yandan öğretmenlere geçmişte katıldıkları eğitimler hakkındaki görüşleri sorulmuştur. Tercihleriyle paralel ifadeleri aldıkları eğitimlerin kaçı için geçerli olduğu konusunda öğretmenler genel olarak her ifadeye ya geçmiş eğitimlerin birçoğu için ya da yarısı için geçerli diyerek değerlendirmişlerdir. Öğretmenler, daha önce hiçbir eğitimde verilen yiyecek ve içecek gibi ikramların yeterli olmadığını ve kalem, defter, bilgisayar gibi gerekli ihtiyaçların temin edilmediğini belirtmişlerdir. Alanyazına bir başka katkı olarak bu çalışma, eğitimlere zorunlu olarak katılan öğretmenlerin görüşünü almıştır. Alanyazındaki çalışmaların çoğu

eğitime gönüllü katılan yani yüksek motivasyon ve isteğe sahip öğretmenlerin (Supovitz ve Zeif, 2000) ihtiyaç, tercih ve değerlendirme görüşlerini incelemiştir (Theis, 1981). Eğitimlere gönüllü katılmayan öğretmenlerin görüşleri ise alanyazında çok net değildir (Bobrowsky, Marx ve Fishman, 2001). Bu açıdan bakıldığında çalışmanın alanyazına bu anlamda bir katkıda bulunduğunu düşünmekteyiz.

Son olarak öğretmenlerin genel olarak hizmetiçi eğitim ihtiyaçları modellenmeye çalışılmış; ancak alanyazında yer alan değişkenler bu çalışmada öğretmenlerin hizmetiçi eğitim ihtiyaçlarıyla anlamlı ilişkiler göstermemiştir. Bunun nedeni öğretmenlerin genel olarak hizmetiçi eğitime ihtiyaç duymadıklarını belirtmeleridir. Örneklendirecek olursak hizmetiçi eğitim ihtiyacı öğretmenin kadın ya da erkek olmasına, yeni ya da tecrübeli olmasına, kadrolu ya da sözleşmeli olmasına, matematik ya da sınıf öğretmeni olmasına, lisans ya da doktora mezunu olmasına, eğitim fakültesi veya başka bir fakülte mezunu olmasına, görev yaptıkları okulun YİBO veya normal ilköğretim olmasına göre bir değişiklik göstermemektedir. Bu sonuç ülkeye özgü durumlarla ilişkilendirilebilir. Türkiye'deki öğretmenler eğitimlerin birçoğuna zorunlu olarak katılmaktadırlar. Bu eğitimlerin bir kısmı öğretmenlerin okullarına ya da bölgellerine uzak yerlerde yapılmaktadır. Ayrıca öğretmenler katıldıkları bu eğitimlerden bilgi ve beceri dışında motive edici başka kazanımlar elde etmemektedirler.

Uygulamaya Yönelik Öneriler

Bu çalışmada öğretmenlerin hizmetiçi eğitim ihtiyaçlarını ve tercihlerini belirleyen çeşitli ipuçlarını bulmak amaçlanmıştır. Belirlenen demografik değişkenlerin ihtiyaçları açıklamada etki değerleri küçük olsa da bireysel farklılıkları dikkate almak daha etkili eğitim modelleri tasarlamak açısından çok önemlidir. Ayrıca hizmetiçi eğitimlerin hedef kitlesine ulaşması ve dolayısıyla eğitimin amacına ulaşması ve kaynakların doğru kullanılması açısından da oldukça önemlidir. Ayrıca bu, ihtiyacı olmayan öğretmenlerin eğitime katılarak boşa zaman harcamaması bakımından da gerekli bir önlemdir.

Bu çalışmada öğretmenler geçmişte aldıkları eğitimlerden genel olarak memnun olsalar da bundan sonraki eğitimler için eğitime ihtiyaç duymadıklarını belirterek katılım göstermekte hevesli değillerdir. Eğer bu verilen eğitimler tasarımı ve işleyişi bakımından sorunlu değillerse çıkan bu sonuç tekrar sorgulanmadır. Öğretmenler verilen tüm bu konularda gerçekten yeterli bilgi ve beceriye sahipler midir yoksa eğitimler öğretmenler için yeterince çekici değil midir? Hizmetiçi eğitimler öğretmenler için nasıl ilgi çekici hale getirilebilir? sorusu bağlı birimler tarafından sorgulanarak gerekli önlemler alınmalıdır. Clement ve Vandenberghe (2000) belirttiği gibi çeşitli motivasyon araçları, destek ve geribildirimler öğretmenlerin daha fazla öğrenmesine ve öğrenme isteğinin artmasına katkıda bulunmaktadır. Örneğin ABD'de hizmetiçi eğitim modeli bu prensibe dayanmaktadır. Öğretmenler hizmetiçi eğitimlere katılarak mesleki gelişim kredisi biriktirmekte ve bu öğretmenlerin yükselmesinde, maaş artışlarında önemli bir rol oynamaktadır. Bu gibi modeller incelenerek ülkemiz koşullarında toplum ve öğretmen ihtiyaçlarına cevap verebilecek en uygun modeller tasarlanmalı ve tartışılmalıdır. Son olarak, verilen birçok eğitim zorunludur; öğretmenler eğitimlerin gönüllük esasına dayanmasını tercih etmektedirler. Bu tercih önemle dikkate alınmalıdır.

Sonuç olarak öğretmenlerin hiçbir koşulda niçin eğitimlere ihtiyaç duymadıklarını belirtmeleri ileri çalışmalar yapılarak derinlemesine mülakatlar ve odak grup görüşmeleri ile ortaya çıkarılmalıdır. Ayrıca verilecek hizmetiçi eğitimlerin planlaması, uygulaması ve değerlendirilmesi aşamaları Bakanlık tarafından bir kez daha dikkatle incelenmelidir. Ders amaçlarının ve içeriğinin belirlenmesi ve hazırlanmasında, dersin anlatımı ve değerlendirilmesinin yapılmasında, ders ortamının hazırlanmasında ve araç ve gereçlerin belirlenmesinde kullanılan modern öğretim tasarımları incelenerek ülke koşullarına, toplum ve öğretmen ihtiyaçlarına uygun modeller geliştirilmelidir. Verilen derslerin takibi yapılarak hedefe ne ölçüde ulaşıldığı belirlenmeli ve dersler gerekli boyutlar açısından yeniden düzenlenmelidir. Verilen eğitimlerin sonunda değerlendirme yapılmalı, sonuçların öğretmenlerin atama, yükseltme vb durumlarında etkili olması sağlanmalıdır. Bu özelliğin yanı sıra eğitim merkezlerinin, içeriklerin ve

ödeneklerin özendirici hale getirilmesi öğretmenlerin hizmetiçi eğitimlere olan yöneliminin arttırılmasında etkili olacaktır.

MEB (2012) öğretmenin genel yeterlilikleri kitabındaki 31 alt yeterlilik alanından sadece biri mesleki gelişimle ilgilidir. Her ne kadar hizmetiçine yönelik önemli çalışmalar yapılıyor olsa da bu çalışmalar yeterince tatmin edici değildir. MEB'in öncelikle bazı temel standartlara dayanan mesleki eğitim politikası geliştirmesi gerekmektedir. Bu standartlar emprik verilere dayanılarak oluşturulmalı ve yapılacak her program tasarımda yol gösterici olmadırlar. "Otur ve öğren" tipi mesleki gelişim yaklaşımlarının artık eskide kaldığı kabul edilmeli ve günümüzde geliştirilen yeni yaklaşım ve tasarımlar uygulanarak etkililikleri değerlendirilmelidir.

İleride Yapılacak Araştırmalara Yönelik Öneriler

Bu çalışma ülke genelinde rastlantısal olarak seçilmiş, 1730 kişiden oluşan bir örneklemle yürütülerek ülkemizde bundan sonra yapılacak mesleki eğitim çalışmaları için bir temel oluşturmayı hedeflemiştir. Bundan sonra yapılacak çalışmalar için şunlar önerilmektedir;

Bu çalışmanın amaçlarından biri olan hizmetiçi eğitim anketi yüksek güvenirlik değerleri ve geçerlilik kanıtlarına sahiptir. Fakat bu anket, ülkeye özgü durumlar içerdiğinden başka çalışmalarda kullanımı durumunda bu dikkate alınmalıdır.

Ülke genelinde bir mesleki gelişim politikası oluşturabilmek amacıyla benzer çalışmaların okul müdürleri ve lise öğretmenleriyle de yapılması gerekmektedir; ancak farklı lise türlerinde görev yapan öğretmenlerin farklı ihtiyaçları ve tercihleri olacağı göz önünde bulundurulmalıdır. Sonuçlar yorumlanırken, bu çalışmada özel okullarda görev yapan öğretmenlerden veri toplanmadığı dikkate alınmalıdır. Özel ve devlet okullarında görev yapan öğretmenlerin ihtiyaçları arasında farklılıkların olup olmadığı ileri çalışmalarla incelenmelidir.

Bu araştırma amacı ve yöntemi gereği betimleyici bir doğaya sahiptir. Öğretmenler, verilen 52 eğitim konusundan az bir kısmına biraz ihtiyaçları olduğunu belirtmişlerdir. Ayrıca bu ihtiyaçlar öğretmenlerin özelliklerine göre de çok fazla farklılık göstermemektedir. Öğretmenlerin ne olursa olsun hizmetiçi eğitime pek ihtiyaç duymadıklarını belirtmelerinin altında yatan sebepler araştırılmalıdır; bu Milli Eğitim Bakanlığı ve araştırmacılar tarafından ileri çalışmalarla derinlemesine irdelenmesi gereken bir konudur. Bu çalışma sonuçları göz önünde bulundurularak "Niçin?" sorusunu yanıtlayabilmek amacıyla birebir ve odak grup görüşmeleri ile bu sonuçlar irdelenmeli ve derinlemesine bilgi edinilmelidir.

Bilindiği gibi Tyler'a (1949) göre öğrenenler program geliştirmede temel kaynaklardan biridir. Bu çalışmada öğrenenlerin ihtiyaç ve tercihleri araştırılmıştır. İleride yapılacak çalışmalarda öğrenenlerin geçmiş özellikleri ve varolan bilgileri de araştırılmalıdır. Tasarım modellerindeki diğer basamakların daha sağlam adımlarla çıkılabilmesi için öğrenenler dışındaki diğer kaynaklar da (konu ve toplum gibi) tasarım öncesinde analiz edilmelidir.

Ayrıca araştırmada kullanılan değişkenler dışında öğretmenlerin hizmetiçi eğitim ihtiyaç ve tercihlerini açıklayacak başka değişkenler de araştırılmalıdır. Bu çalışmada okul büyüklüğü, görev yapılan bölge gibi ikinci düzey değişkenler kullanılmadığından çok basamaklı modelleme yöntemi uygulanmamıştır. Teknik olarak bu değişkenlerin kullanılması için her öğretmenin hangi okul ve bölgeden olduğunun kesinlikle bilinerek bu verilerin gruplandırılması gerekmektedir. Gruplandırılmadığı takdirde gözlemlerin bağımsızlığı sayıltısı ihlal edilecek ve Tip 1 hata ihtimali yükselecektir. Bunu engellemek amacıyla bu çalışmada bu iki değişken kullanılmamıştır; ancak ileride yapılacak araştırmalarda bu veriler belirlenirse çok basamaklı modelleme yolu ile öğretmenlerin ihtiyaç ve tercihlerine yönelik daha geniş bilgiye ulaşılabilinecektir.