RELATIONS BETWEEN CLASSROOM TEACHERS' ATTITUDES TOWARD
CHANGE, PERCEPTIONS OF "CONSTRUCTIVIST" CURRICULUM CHANGE
AND IMPLEMENTATION OF CONSTRUCTIVIST TEACHING AND
LEARNING ACTIVITIES IN CLASS AT PRIMARY SCHOOL LEVEL

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Approval of the Graduate School of Social Sciences

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

RELATIONS BETWEEN CLASSROOM TEACHERS' ATTITUDES TOWARD CHANGE, PERCEPTIONS OF "CONSTRUCTIVIST" CURRICULUM CHANGE AND IMPLEMENTATION OF CONSTRUCTIVIST TEACHING AND LEARNING ACTIVITIES IN CLASS AT PRIMARY SCHOOL LEVEL

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This study aimed at determining whether classroom teachers' attitudes toward change correlate with their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level.

Through a questionnaire, data were collected from 236 classroom teachers teaching in all public primary schools in the city center of Afyonkarahisar, Turkey. Demographical data of the participants, their attitudes toward change, perceptions of constructivist curriculum change, and implementation of constructivist teaching and learning activities were reported in terms of frequencies, percentages, and means. Bivariate correlations were employed to understand the relations among classroom teachers' attitudes toward change, perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities at primary school level.

The results revealed that classroom teachers were open to change and often implemented constructivist teaching and learning activities in class whereas they had mixed perceptions about constructivist curriculum change carried out in Turkey in 2004-2005 academic year. Classroom teachers' attitudes toward change were

significantly but moderately correlated with their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities at primary school level. Besides, classroom teachers' perceptions of constructivist curriculum change were significantly but moderately related to their implementation of constructivist teaching and learning activities.

Keywords: Change, Curriculum Change, Constructivist Curriculum Change, Implementation of Constructivist Teaching and Learning Activities, Classroom Teachers

ÖZ

SINIF ÖĞRETMENLERİNİN DEĞİŞİME YÖNELİK TUTUMLARI İLE
"OLUŞTURMACI" EĞİTİM PROGRAMI DEGİŞİKLİKLERİNE YÖNELİK
ALGILARI VE OLUŞTURMACI ÖĞRENME-ÖĞRETME ETKİNLİKLERİNİ
UYGULAMA DÜZEYLERİ ARASINDAKİ İLİŞKİ

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Bu çalışmanın amacı, sınıf öğretmenlerinin değişime yönelik tutumları ile oluşturmacı eğitim programı değişikliklerine yönelik algıları ve oluşturmacı öğrenme-öğretme etkinliklerini uygulama düzeyleri arasında ilişki olup olmadığını incelemek, varsa, ne yönde bir ilişki olduğunu ortaya koymaktır.

Veriler, Afyonkarahisar'da bulunan tüm resmi ilköğretim okullarında görev yapan 236 sınıf öğretmeninden bir anket yoluyla toplanmıştır. Katılımcıların kişisel bilgileri, değişime yönelik tutumları, oluşturmacı eğitim programı değişikliklerine yönelik algıları ve oluşturmacı öğrenme-öğretme etkinliklerini uygulama düzeyleri frekans, yüzde, aritmetik ortalamaları ile sunulmuştur. Verilerin analizinde ayrıca iki değişkenli ilişkisel teknikler kullanılmıştır.

Sonuçlar, sınıf öğretmenlerinin değişime ve oluşturmacı öğrenme-öğretme etkinliklerini ilköğretim düzeyinde uygulamaya açık ancak 2004-2005 eğitim-öğretim yılından itibaren Türkiye'de gerçekleştirilen oluşturmacı eğitim programı değişiklikleri konusunda kararsız olduklarını göstermektedir. Sınıf öğretmenlerinin değişime yönelik tutumları ile oluşturmacı eğitim programı değişikliklerine yönelik algıları ve oluşturmacı öğrenme-öğretme etkinliklerini ilköğretim düzeyinde uygulamaları arasında anlamlı ancak orta düzeyde ilişki bulunmuştur. Ayrıca, sınıf

öğretmenlerinin oluşturmacı eğitim programı değişikliklerine yönelik algılarının, oluşturmacı öğrenme-öğretme etkinliklerini uygulama düzeyleri ile de ilişkisinin anlamlı olduğu ortaya çıkmaktadır. Ancak bu ilişkinin de orta düzeyde olduğu anlaşılmaktadır.

Anahtar Kelimeler: Değişim, Eğitim Programı Değişiklikleri, Oluşturmacı Eğitim Programı Değişiklikleri, Oluşturmacı Öğrenme-Öğretme Etkinliklerinin Uygulanması, Sınıf Öğretmenleri

To my mother, my father and my brother

whose unconditional support, love and wishes made my dream possible

ACKNOWLEDGEMENT

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CHAPTER 1

INTRODUCTION

This chapter provides information about the background to the study with a brief description of recent primary school curriculum change since the academic year of 2004-2005 in Turkey. The purpose, significance of the study and definitions of the key terms will also be presented.

1.1. Background to the Study

Teachers have been delivered curriculum in bright, shiny new boxes and by the end of the academic year, students have been expected to succeed (Loucks & Pratt, 1979). One of the reasons behind a strong desire for an outstanding performance expected from students may be to show an evidence of that curriculum did really work well. However, the success of the changed curriculum depends on how it is interpreted by its implementers, that is, teachers. Unfortunately, how changed curriculum is perceived and implemented by teachers is neglected utmost since teachers as onlookers are made obliged to sit on the sidelines and just watch what happens to the curriculum without questioning. Nevertheless, the attitudes of teachers are central to curriculum change (Barr, 1947, cited in Banning, 1954). Teachers may resist to change and to implement changeable concepts of the curricula in terms of the goals, content, the teaching-learning process, evaluation and resources since change or reform can appear threatening and therefore bring resistance. It can bring suspicion, fear and dissatisfaction (Pretorius, 1999). In order to change the curriculum, one must change the people who operate it (Banning, 1954). Just as teachers are implementers of any kind of curriculum change, their perceptions toward the change process (need for the change, manner in which the change was managed, amount of teacher input into the change, etc.) is the single best indicator of teachers' free choices and actual decisions concerning adoption of the change (Norris & Briers, 1989, cited in Connors & Elliot, 1994). On the other hand, the neglected phase in curriculum change is implementation since we make our way through

initiation, development, and adoption phases of curriculum change, but then we do not take steps necessary to achieve a satisfactory level of implementation (Patterson & Czajkowski, 1979). Three components of implementation that seem most often neglected are as follows: Planning for implementation, applying change strategies, and conducting staff development (Patterson & Czajkowski, 1979).

Before to mention about what triggers curriculum change all around the world in general and specifically in Turkey, it seems necessary to draw a general picture of change in global context. At recent times, the only word that explains our recent world is "change." The time flows and everything tends to change gradually. The changes, that is, transitions occurred in all aspects of the world may be self-directed and are usually invoked by others. In recent times, transitions from an industrial society to a knowledge society, the changes in production with the shift from Fordism to the flexible system of production, alterations from nation-states to global world and from modern to postmodern way of thinking have a significant effect on educational systems of several countries (Tekeli, 2003).

What is expected from education is no longer to enable individuals to compete with others. On the contrary, societies should be educated to compete with each other to challenge with the changing concepts of the world (Dülger, 2002). According to aforementioned changes occurred at global level, numerous countries including Turkey revise and reform also their educational systems to dispel deficiencies, ambiguities and contradictions.

As stated by Akpınar and Aydın (2007), Turkey's legislative alignment process of European Union and international educational norms, economic and technological innovations occurred at global level, looking for a quality in education, current system's insufficiency to meet expectations and desire to have an educational system that contributes to economic development, and finally, unfavorable PISA (Programme for International Student Assessment) 2003 and 2006 results are among those reasons behind recent educational changes held in Turkey.

Since there is no problem being faced while accessing knowledge thanks to global technological changes, individuals as learners are able to cope with changeable concepts of the world without any delay. As a result, constructivism as an

approach which is "accessing and building forthcoming knowledge by a learner him/herself upon prior one in his/her mind" is gaining popularity all around the world. With respect to this, considering constructivist approach, Ministry of National Education (MoNE) in Turkey has made some radical changes in primary school curriculum including the scopes of Turkish language, mathematics, life studies, social studies, science and technology courses and so many on since the academic year of 2004-2005. Within the framework of curricula reform, curricula delivered by MoNE are learner centered and sensitive to individual differences and enriched not only with multiple intelligence practices, but also spiral, thematic and skill approaches (Educational Reform Initiative [ERI], 2005).

With regard to aforementioned constructivist curriculum change, there have been various studies conducted on how it is perceived and implemented by teachers and on change and attitudes toward change as a field of interest in educational administration and planning. But there have been very few associating those two. It was aimed to make a contribution to the literature in terms of investigating whether teachers' attitudes toward change (their openness or resistance to change) correlate with their perceptions of constructivist curriculum change initiated in Turkey since the academic year of 2004-2005 and implementation of constructivist teaching and learning activities which forms the rationale behind this study.

1.2. Purpose of the Study

In addition to describing classroom teachers' attitudes toward change, perceptions of constructivist curriculum change, and their implementation of constructivist teaching and learning activities in class, the main purpose of this study was to examine the relationship between classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class at primary school level.

1.3. Research Questions and Hypotheses

Research questions addressed in this study were as follows:

1. What are the attitudes of classroom teachers toward change?

2. How do classroom teachers perceive constructivist curriculum change?

3. How often do classroom teachers implement constructivist teaching and learning activities in class?

4. Is there a relationship between classroom teachers' attitudes toward change and their perceptions of constructivist curriculum change?

5. Is there a relationship between classroom teachers' attitudes toward change and their implementation of constructivist teaching and learning activities in class?

6. Is there a relationship between classroom teachers' perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class?

7. Do the relationships among classroom teachers' attitudes toward change, perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level differ according to gender, teaching experience, the faculty or school and the department graduated, grade level and the number of students in classroom taught, their involvement in in-service training (including its duration and effectiveness) about recent primary school curriculum, and their self-efficacy of its context and implementation?

Hypotheses formulated in this study were as follows:

1. There is no relationship between classroom teachers' attitudes toward change and their perceptions of constructivist curriculum change.

2. There is no relationship between classroom teachers' attitudes toward change and their implementation of constructivist teaching and learning activities in class.

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3. There is no relationship between classroom teachers' perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class.

4. The relationships among classroom teachers' attitudes toward change, perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class did not differ on gender, teaching experience, the faculty or school and the department graduated, grade level and the number of students in classroom taught, their involvement in in-service training (including its duration and effectiveness) about recent primary school curriculum, and their self-efficacy of its context and implementation.

1.4. Significance of the Study

Although teachers play particularly central roles in education, traditionally they have not had a major voice in educational change and their work roles and demands, purposes, and personal experiences are frequently ignored (Apple & Jungck, 1993; Cohn & Kottkamp, 1993; Johnson, 1990; Kilbourn, 1991; Prawat, 1991; Romanish, 1993; Sprague, 1992).

Correspondingly, several researchers report the tendency of policy makers to impose change on teachers rather than involving them (Barrow, 1984; Gipps, McCallum, & Brown, 1999; Hadley, 1999; Holt, 1986; Richards, 2003). This may be due to the fact that people often borrow three levels of curriculum when they attempt to change it (Kilpatrick, 2009): (1) intended; the administrator's point of view, (2) implemented; the teacher's point of view, (3) attained or realized; the student's point of view. As a requirement of this three-level approach, it is assumed that curricular power flows directly from administrator to teacher and finally to student. The approach offers a top-down view of the curriculum and therefore of change and casts the teacher as an obedient employee who is given a curriculum to implement and who plays no role in co-constructing the curriculum along with students.

This correlational study anticipated to be a contribution to the literature which aimed at determining the relationship between classroom teachers' attitudes toward

change and their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level is worth being conducted since it provides feedback about how the curriculum intended is perceived and implemented by teachers in classroom. Thus, it helps educational policy makers and curricularists see how huge a gap between what is on paper and what is implemented is. An investigation of relations between classroom teachers' perceptions and implementation of the intended curriculum at primary school level and their attitudes toward change also makes them be aware of teachers' tendencies toward change in their further attempts to change the curriculum.

1.5. Definitions

Change: The process of transforming phenomena into something different (Print, 1993).

Curriculum: Although there is no consensus on its definition, it refers, in this study, to the curriculum intended, that is, all planned for learning under the auspices of schools according to the administrator's point of view (Kilpatrick, 2009).

Curriculum change: A deliberate attempt to introduce one or more components of the curriculum which are different or new (Everard & Morris, 1996; Markee, 1997). Recently changed or new primary school curriculum mentioned in this study refer to the curriculum being conducted since the academic year of 2004-2005.

Constructivist curriculum change: The curriculum change the MoNE undertook in 2004-2005 and labeled it as "constructivist."

Curriculum implementation: The process of carrying out the intended curriculum by teachers in order to make students achieve desired outcomes by various instructional practices in the classroom.

Attitude: A delimited totality of a person's cognitions, affective reactions, and behavioral tendencies (Dunham, Grube, Gardner, Cummings, & Pierce, 1989).

Attitude toward change: A delimited totality of a person's cognitions about change, affective reactions to change, and behavioral tendencies toward change (Dunham, Grube, Gardner, Cummings, & Pierce, 1989).

Classroom teacher: Teachers teaching 1-5th graders at primary schools are identified as classroom teachers in this study.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter provides information about the construct of change, attitudes toward change, educational change, and its subcategory, curriculum change, and finally studies on curriculum change in general and specifically on constructivist primary school curriculum change held in Turkey since the academic year of 2004-2005.

"πάντα χωρεῖ καὶ οὐδὲν μένει"

Heracleitus

2.1. An Only Phenomenon Staying Abide: Change

The aforementioned quote of a philosopher who claimed that one can not step twice into the same river was interpreted by Plato in Cratylus (Sedley, 2003) as follows: "Everything changes and nothing stands still." That perpetually compels us to keep up with current time.

According to Print (1993), change refers to the process of transforming phenomena into something different. It has the dimensions of rate (speed), scale (size), degree (thoroughness), continuity (profoundness) and direction. Change is a lifelong process, similar to learning, that is, continuous (McCombs & Whisler, 1997). Markee (1997) stated that change is an ongoing, almost unconscious process that involves reworking familiar elements into new relationships. Change is at once simple and complex, and therein lays its fascination (Fullan, 1983).

Change is mostly confused with the word "innovation" which is a popular word frequently used in economics, business, entrepreneurship, design, technology, sociology, and engineering. For instance, according to Lovat and Smith (2003), what by change meant is exchanging the "old" for the "new". However, according to Webster's dictionary (1993), innovation refers to introducing something new whereas change is the act of making something different in form, quality, or state.

Even though Markee (1997) recommended interchangeably using those words due to their being overlapping concepts, change may occur either naturally or deliberately while innovation is a proposition for change since it imposes change (Fullan, 1999; Print, 1993). Innovations are somehow more deliberate, willed and planned, rather than occurring spontaneously (Miles, 1964, cited in Huberman, 1973). Changes may also have positive or negative aspects whereas innovations possess only positive aspects. That is, every innovation can be clustered under any types of change but every change can not be referred to an innovation (Özkara, 1999, cited in Kurşunoğlu, 2006). Changes may be both quantitative and qualitative but innovations occur qualitatively at most times (Başaran, 1998, cited in Kurşunoğlu, 2006).

2.2. Change in Education

Education is seen as an arena for change as public opinion by each successful government and educational improvement is always supported and every government promises to higher standards, increase achievement and to improve schools, whatever it takes. A common denominator of educational policy-making is improvement of all schools, and politicians are understandably very keen on securing improved standards of education (Harris, 2009).

When political debates over education in the developing world considered, there are only two fundamental statements on which consensus reached: First, education is the most important thing for the country's future and second, education is not going well. Everyone agrees on those two that seem to be the same case in developed countries as well since there are many reasons why it is claimed that education is the most important thing and why education is not going well. Those trigger education to change and us to think of what the directions of change should be (Moreno, 2009).

As stated by Hodgkinson (1991), educational change that is the frequency and radicalism of noticeable recent change has turned into a fact of everyday life so that sociologists of education have been slow in responding the current status. Alwan (2006) defined educational change as an ongoing process that takes place with or

without deliberate introduction of something different to education. As stated by Hargreaves (2009), the earliest efforts of educational change were most evident in England and to some extent Australia and New Zealand in the early 1990s. After a decade, educational change and reform strategies and their accompanying research directions have become bigger, tighter, harder, and flatter since educational systems are continually susceptible to further change by a variety of people as a result of history which is full of three earlier turnings that defined a time of prosperity, optimism, security, pragmatism and social conservatism in the 1950s; a period of cultural and spiritual awakening in the 1960s and 1970s; and an era of individualism, self-centeredness and general unraveling in the 1980s and 1990s (Hargreaves, 2009).

According to Huberman (1973), change in education may occur in three ways: 'hardware,' that is, additions to school equipment, such as new classrooms, teaching machines, books or playgrounds; 'software,' usually in the content and range of the curriculum, or in the methods of delivery and reception; and as a subcategory of software 'interpersonal relations' – changes in the roles and relationships between teachers and students, between teachers and administrators or teachers and teachers. As also stated by Towndrow, Silver and Albright (2009), changes occurred in education might include changes in policy goals, curriculum design and implementation, assessment techniques, administrative issues, leadership, classroom practices, instructional technologies and resources, and teacher capacities that let an analysis of several factors affecting those changes, change agents, and contexts. According to Miles, Saxl, and Lieberman (1988), special "assisters" acting as consultants and facilitators of change are known as "change agents." They are typically not supervisors, yet people with a "license to help." As adopters comprising individuals, schools, and states, they adopt changes with regard to a framework suggested to evaluate whether changes are successfully implemented at scale. In addition to adopters, aforementioned framework also considered contexts as environments. Contexts as environments refer to institutional environments that influence users, for instance, strength of standards and accountability, standards for professional performance and environmental influences on change makers, for example, degree and type of accommodation to the environment or degree and type

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of challenge to the environment (Cohen & Ball, 2007, cited in Towndrow, Silver, & Albright, 2009).

As stated by Brickell (1962), the key to successful change is providing assistance to the teachers clustered under adopters with the implementation of change which refers to the process of putting into practice an idea, program or set of activities and structures new or different to the people attempting or expected to change (Fullan & Stiegelbauer, 1991). However, educational policy-makers focus their attention and energy on the 'what' of desired educational change and neglect the 'how' (Rogan, 2007) which may result in strong resistance to policy messages and low outcomes due to poor implementation (Altınyelken, 2010) that means a waste of time, money, and energy (Dyer, 1999, cited in Altınyelken, 2010).

2.3. Change in Curriculum

The last ten years have seen enormous changes in education, and this has been mirrored by the changes in curriculum and instruction for six years. Curriculum lies in the heart of education as it deals with the content of learning and its organization, the methodologies of the acquisition of learning and the assessment techniques (Karatzia-Stavlioti & Alahiotis, 2007). The idea that the school curriculum is something to be changed systematically was one of the twentieth century's contributions to education (Kilpatrick, 2009).

Curriculum has several different meanings for several people. Tanner and Tanner (1995) stated that curriculum as a concept has experienced changes during the twentieth century without any consensus made on an appropriate definition. Citing amble definitions of curriculum, Ornstein and Hunkins (2004) pointed out the diversity of approaches used to define curriculum that range from too specific to too general. Curriculum can be thought of as (1) experience (Connelly & Clandinin, 1988; Hargreaves, Hopkins, & Leask, 1994; Marlow & Minehira, 1996; Rodgers, 1994), or as (2) both experience and knowledge (Becher & Maclure, 1978; Elliott, 1994), or as (3) plan (Celce-Murcia & Olshtain, 2000; Dubin & Olshtain, 2000), or as (4) both plan and process (Brown, 1995; Graves, 2003; Johnson, 1994; Print, 1993; Richards, 2003).

This confusing situation indicates that there are so many gray areas and human factors with different educational values in education. Marsh and Willis (2003), moreover, pointed out the disagreement about what the curriculum of the schools should be as a result of varying understanding of the term. Each person seeing only a small and not necessarily the same part of the overall picture does not only create confusion but may also impede the comprehensive understanding of the term. Consistently, Demirel (1992) also figured out that an ongoing effort for attaining a comprehensive curriculum definition in Turkey is necessary to overcome at least one among several curricular problems Turkey encounters today.

Curriculum change is a subset of educational change (Lovat & Smith, 2003). When curriculum change considered, there is a deliberate attempt to introduce one or more components of the curriculum which are different or new (Everard & Morris, 1996; Markee, 1997).

As stated by Banning (1954), curriculum change can be defined as largely a matter of discovering and applying better procedures for improved learning experiences for learners and can ideally be managed in a five-step process (Lachiver & Tardif, 2002):

(1) an analysis of the existing offerings and context;

(2) the expression of key program goals and objectives in a mission statement;

(3) a prioritization of resources and development strategies;

(4) the implementation of the targeted curricula change; and

(5) the establishment of assessment tools and processes.

In the implementation process of a new curriculum, the following seven principles are often used in order to conceptualize what drives curriculum change (Fullan, 2005, cited in Sahlberg, 2005; Hargreaves & Fink, 2005, cited in Sahlberg, 2005): (1) Understanding why an existing curriculum needs to be changed to show how curriculum change is associated with political, social, and economical foundations to raise the quality and fill the gap in student achievement, (2) understanding the complexity and internal dynamics of change process to sustainably implement change held in curriculum which is often difficult and frustrating since it

requires people at the top to stop and think about the aspects of change, (3) making policies, determining strategies, allocating resources, and taking actions that aim at increasing the collective power of people in charge with implementation of change in curriculum, (4) developing professional learning communities at the local, school and community level, and also learning from other schools and teachers that make successful curriculum change is possible, (5) collecting data from student learning, analyzing data for more specific understanding, preparing action plans based on the data analyzed, and informing parents about students' performance which develop cultures of evaluation and make successful curriculum change is also possible, (6) developing leadership throughout the school in order to promote and sustain curriculum change, and finally (7) utilizing schools' already existing ideas about how to foster teaching and help students learn.

Curriculum change challenges teachers' existing skills (Fullan & Hargreaves, 1992; Markee, 1997). As a result, introducing change does not necessarily mean that it will be implemented by those affected by it due to lack of commitment (Fullan & Stiegelbauer, 1991).

Change is arrived at a compromise by the lack of any interpersonal communication between teachers and curriculum designers (Fernandez, Ritchie, & Barker, 2008) since teachers are not trained to think of themselves as part of the curriculum and they only need to be encouraged to get involved to take up their roles as change agents (Holt, 1986).

Montgomery and Way (1995) explained that teachers are being declared as the "missing voice" in education with the nature of curriculum change approaches undertaken. Cheng (1994) categorized three kinds of curriculum change approaches as shown in Table 2.1.

According to Cheng's (1994) simplistic curriculum change approach, teachers are supposed to be passive, and teacher competence is assumed to be static. Curriculum change can be planned and implemented effectively in a short run by administrators or external experts. When teacher competence development approach considered, it is assumed that curriculum change can be imposed by administrators or external experts and teacher competence should be developed to meet all needs of the

changed curriculum. Both of those approaches neglect the dynamic nature of curriculum change, teacher development, and the importance of teachers' active role, involvement and commitment to curriculum planning. That is why those two approaches may not bring long-term effectiveness to teaching and learning.

However, as also stated by Cheng (1994), dynamic curriculum change approach assumes that curriculum effectiveness is a dynamic concept involving both curriculum and teacher competence development process which is ongoing and cyclic; curriculum can be changed and developed effectively only when teachers are sufficiently engaged in the process; teacher competence should be developed not only to meet the needs of the changed curriculum but also to develop the curriculum more appropriately to students' characteristics, school goals, and pre-existing school conditions in a long run; and effective curriculum change should involve not only administrators or external experts but also teachers in curriculum planning and decision making as well. Those above mentioned are why dynamic curriculum change approach seems to bring, compared to other approaches, more contribution to effective teaching and learning through development and change in both curriculum and teacher competence (Cheng, 1994).

Table 2.1. Approaches to Curriculum Change

	Simplistic curriculum change approach	Teacher competence development approach	Dynamic curriculum change approach
Nature of change	One-way change	One-way change	Two-way change, dynamic
Focus of change	Curriculum	Teacher competence	Curriculum and teacher competence
Ways of maximizing effectiveness	Curriculum adapts to teachers and students	Teachers adapt to the changed curriculum	Both curriculum and teachers should be developed
Initiator of change	Change planned by administrators or external	Change imposed by administrators or external	Teacher participation in planning change

Table 2.1 (cont'd)

	Simplistic curriculum change approach	Teacher competence development approach	Dynamic curriculum change approach
Teacher role	Passive implementer	Passive implementer	Active implementer and planner
Time framework	Short-term	Short-term	Long-term, continuous, cyclic

(Source: Cheng, 1994)

However, as also stated by Cheng (1994), dynamic curriculum change approach assumes that curriculum effectiveness is a dynamic concept involving both curriculum and teacher competence development process which is ongoing and cyclic; curriculum can be changed and developed effectively only when teachers are sufficiently engaged in the process; teacher competence should be developed not only to meet the needs of the changed curriculum but also to develop the curriculum more appropriately to students' characteristics, school goals, and pre-existing school conditions in a long run; and effective curriculum change should involve not only administrators or external experts but also teachers in curriculum planning and decision making as well. Those above mentioned are why dynamic curriculum change approach seems to bring, compared to other approaches, more contribution to effective teaching and learning through development and change in both curriculum and teacher competence (Cheng, 1994). Despite the fact that dynamic curriculum change approach seems to be more powerful, the question of "What kind of organizational context can provide a mechanism which promotes and sustains an ongoing process for curriculum change and teacher development?" still remains unanswered. In order to explore aforementioned question, a three-level organizational model of curriculum change is recommended as illustrated in Figure 2.1 below (Cheng, 1994).

Considering this model, curriculum change and teacher competence development that are mutually developed and reinforced in a long run happen in a

three-level context of school organization including the "individual level," the "program level," and the "whole school level" across which there is a hierarchy of influence (Cheng, 1994).
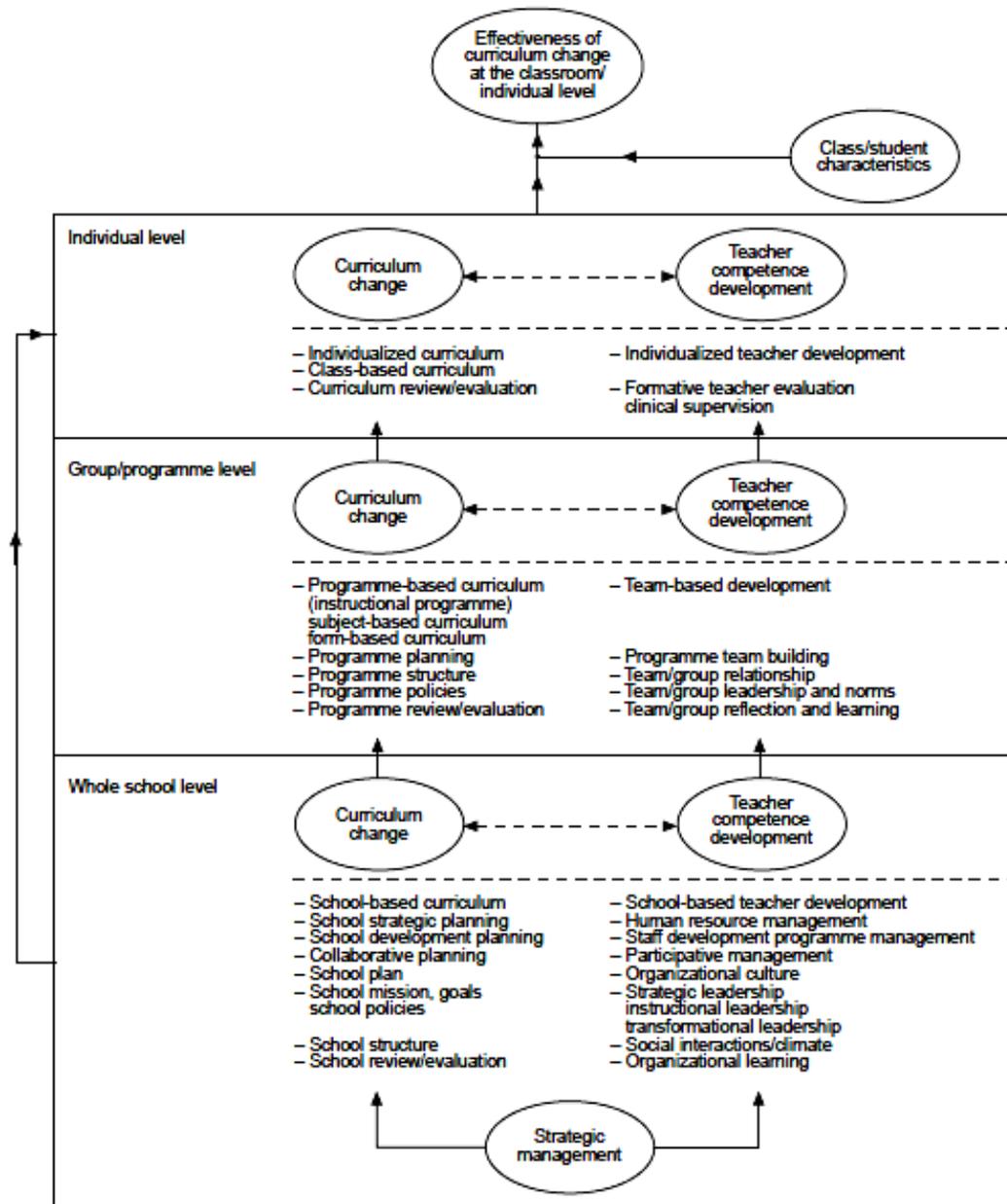
Figure 2.1 "A Three-Level Organizational Model of Curriculum Change"
(Source: Cheng, 1994)

At the individual level, curriculum change often occurs in terms of individualized curriculum, class-based curriculum and their related curriculum evaluation while teacher competence development is often individualized by

formative teacher evaluation (Cheng, 1994). At the program level, curriculum change is often in terms of subject-based curriculum and also composed of curriculum planning, curriculum structure, curriculum policies, and curriculum evaluation while teacher competence development at program level consists of group/team relationship, group/team leadership, group/team norms, and group/team reflection and learning (Cheng, 1994). At the whole school level, curriculum change and development are often in terms of school strategic planning and consist of collaborative planning, school development plan including school mission, goals, policies, strategies, school structure, and school evaluation while teacher development at this level is school-based which may include human resource management, staff development, program management, participative management, organizational culture, social interactions, leadership and organizational learning (Cheng, 1994).

May be affected by congruence between curriculum change and teacher competence development and among aforementioned levels, effectiveness of curriculum change at individual level is directly determined by the interaction between curriculum change and teacher competence and characteristics of students and the class; and is also indirectly affected by curriculum change and teacher development at the program and the whole school level (Cheng, 1994). The greater the congruence between change and development and across levels, the greater the effectiveness of curriculum change for teaching and learning (Cheng, 1994). Thus, involvement of teachers in the various stages of change is recommended (Becher & Maclure, 1978; Becher & Maclure, 1982). As stated by Finch (1981), the more teachers are involved, the more effective the curriculum.

Furthermore, Lieberman (1997) highlighted the benefits of involving teachers in administrative decisions as a means of promoting more active involvement in curriculum change. Huberman (1983) surprisingly stated that successful implementation of curriculum change occurred at places where administrators exerted strong and continuous pressure on teachers but only when substantial assistance is supplied since it tends to increase teachers' technical mastery and their commitment.

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The degree of involvement of teachers in curriculum change has changed over the years since teachers have become more actively engaged in the process (Finch, 1981). Teacher voice and ownership of curriculum change provide a key to understanding the perennial problem of the transformation of innovative ideas from conception to implementation (Kirk & Macdonald, 2001). Bernstein (1974) explains that teachers have varying degrees of control over "the selection, organization, and pacing of the knowledge transmitted and received in the pedagogical relationship" with their students.

Regarding teachers' involvement in curriculum change, it seems important to mention about their attitudes toward that kind of change since a number of writers have emphasized that member attitudes can play an important role in determining whether a person chooses to support or resist a change (Kirton & Mulligan, 1973; Patchen, 1965). Especially educators' attitudes toward curriculum change determine how they will facilitate the process of change (Makhwathana, 2007). Teacher participation in the change process has a major effect on attitude and implementation of curricular change (Nicholson & Tracy, 2001; Rosenholtz, 1987, cited in Lieberman, 1990). Curriculum change needs to involve teachers not only in the development process of the new curriculum but must also engage them with the rationale for change (Kelly, 1990, cited in Higham, 2003).

2.4. Attitude Toward Change

Every change is interpreted by others based on their attitudes (Newstrom & Davis, 1997). The term "attitude" can be defined as what people think, feel, and do. According to social psychologists, attitudes consist of three dimensions: (1) cognitive, (2) affective and (3) behavioral (van der Zander, 1984, cited in Kurşunoğlu, 2006). Attitude toward change in general consists of a person's cognitions about change, affective reactions to change, and behavioral tendency toward change. Attitude toward a specific change consists of a person's cognitions about that change, affective reactions to that change and behavioral tendency toward that change (R. B. Dunham, J. A. Grube, D. G. Gardner, L. L. Cummings and J. L. Pierce, 1989, personal communication, November 17, 2009). For instance, it can be

thought that classroom teachers' attitudes toward curriculum change encompasses classroom teachers' cognitions about curriculum change, their affective reactions to curriculum change and their behavioral tendencies toward curriculum change.

As stated by Kurşunoğlu (2006), when attitudes of employees in an organization toward change are determined, possible preventive actions can be taken and right decisions can be given about the change process and about determining, planning, implementing, and finally evaluating change. This can also be valid for teachers. It seems possible to take preventive actions and give right decisions about determining, planning, implementing and evaluating any type of change when attitudes of teachers toward change are exactly known. They may either be willing to change or resist changing. Benveniste and McEwan (2000) suggested that adoption of educational changes such as new pedagogies might be accounted for by teachers' willingness (motivation and commitment) to change.

On the other hand, Guhn (2009) defined the resistance to change as a human tendency that is easily understood since change typically requires new competences and might lead to undesirable outcomes, such as exposing one's lack of competence and also cited strategies for facilitating motivation for change as follows: The resistance to change can be overcome when change is considered as a need by the implementers; when there is a positive top-down press for the change (Battistich et al., 1996; 2000, cited in Guhn, 2009; Noblit et al., 2001, cited in Guhn, 2009); when good relationships are built among school staff or between school staff and parents and when they are involved in decision-making (Comer, 2005, cited in Guhn, 2009; Woodruff et al., 1998, cited in Guhn, 2009); when competences are increased for successful accomplishment of the change.

Change also depends on teacher professionalism. A managerial professional of teaching is described as a professional who clearly meets corporate goals, manages a range of students well and documents their achievements and problems for public's accountability (Brennan, 1996, cited in Day & Smethem, 2009).

Teachers have been survived over the past 20 years rather than have developed since changes in education over that period of time have had negative impact on teachers' morale and sense of professionalism. According to Day (2002),

changes occurred in education that are different in every country in their content, direction and pace challenge teachers' existing practices, resulting in periods of at least temporary destabilization, and also in an increased workload for teachers. They do not always pay attention to teachers' identities—arguably central to motivation efficacy, commitment, job satisfaction and effectiveness that are categorized under common factors of educational change.

There is a widely recognized view that the success of the curriculum change is contingent upon the professional development of teachers (Blenkin, Edwards & Kelly, 1997, cited in Ekiz, 2003). There is a close relationship between teacher professionalism and teachers' control over the curriculum (Helsby & McCuloch, 1996, cited in Ekiz, 2003). Ekiz (2003) also assumed that there can not be any curriculum implementation without teacher professionalism since there is a close relationship among them. Developed for improving education and student learning, professional development programs are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students (Guskey, 2002).

The success of each pedagogical change, especially of such a radical one as a national curricular reform, is significantly related to teacher perceptions of instruction and other educational dimensions, and also to how well informed and qualified the teachers are to introduce change and what support they get in this process. How teachers perceive the main goal of a reform is important because it greatly influences their motivation to change their own professional practice and achieve the goals of the reform (Kalin & Valenčič Zuljan, 2007).

2.5. Previous Studies on Curriculum Change

A wide range of studies conducted about curriculum change in international (in other countries) and national (in Turkey) context will be covered below.

2.5.1. Previous Studies on Curriculum Change at International Context

To begin with, according to Pepper's (2008) report of an international research conducted through Qualifications and Curriculum Authority (QCA)'s

International Review of Curriculum and Assessment frameworks internet archive (INCA) and the Eurydice network on education in Europe in order to provide a snapshot of changes to the curriculum since 2005 in the following 10 countries that were selected based on the relevance of the changes in their curricula, of which researchers were aware, to the policy agenda of England: France, Germany, Italy, New Zealand, Northern Ireland, Norway, Scotland, Spain, Slovenia, and finally Australia – Tasmania. Results of Pepper's (2008) report that involves a comparative analysis of the data about curriculum changes held in above mentioned countries since 2005 indicated that several of the countries had made changes in their curricula to raise standards, particularly in literacy and numeracy and international assessment studies such as Program for International Student Assessment (PISA) 2007 and Progress in International Reading Literacy Study (PIRLS) 2006 that had become important especially for France, Germany and New Zealand. Changes in Northern Ireland, Norway, Scotland and Slovenia have emphasized broader learning outcomes to prepare students to be lifelong learners and active participants in society.

On the other hand, Pepper (2008) reported that the way the content of the curriculum is organized differs from country to country. For instance, in some countries, the curriculum is typically organized through subjects whereas in others, it is organized by areas. Of all, only Italy and Northern Ireland recently moved away from subjects towards areas and the content of the curriculum in six countries was already organized by areas due to (1) cognitive development; (2) alterations from pre-primary modes of learning; (3) curriculum integration to support optimal learning; (4) new importance given to cross-curricular competences; (5) a need to make the curriculum more understandable and manageable.

Although the content of the curriculum is organized based on areas or subjects that tend to form the basis of assessments, there is also a trend towards the application of knowledge through using concepts of 'competences' or 'skills' in the curriculum across all countries (Pepper, 2008).

In a few of those countries, foreign languages and citizenship education have been given priority at primary school level by recent curriculum changes while some of them are trying to develop an appropriate curriculum for children's stages of

development which offers continuity across pre-primary, primary and on into secondary education (Pepper, 2008).

In another comparative case study conducted by Vulliamy, Kimonen, Nevalainen and Webb (1997), the processes of curriculum changes in primary schools in England and Finland were investigated in relation to three themes: teachers' values, curriculum and classroom organization and curriculum planning. How teachers interpret and react to changes is determined by their identity and the ethos of very small schools enable them to be more conservative in terms of their existing value systems than those teaching at other schools (Vulliamy, Kimonen, Nevalainen, & Webb, 1997) although echoes of events, conditions, issues or movements outside of schools that are the media by which changes in curriculum policy and practice accounted for had effect on classroom curriculum practices (Cornbleth, 2008).

A mixed-method study conducted by Cresdee (2002) to describe circumstances that affect the manner in which primary school teachers in Western Australia perceive recent curriculum changes, types of support they access, and relative usefulness of that support was significant since ways for teachers to deal with future changes were explored instead of only describing their responses to change. Cautiously drawn findings of this study (Cresdee, 2002) were as follows: Most teachers were positive towards curriculum change although their irresistible workload causes a tough barrier to any initiative; most of them would alter initiatives to meet their students' needs and adjust to their orientations at present; the way teachers perceive and cope with curriculum change differed on their self-efficacy but not on their age and experience of teaching; school context had also effect on their attitudes and responses to curriculum change and the type of professional development accessed; in terms of professional development, interaction among teachers was the most useful type since action research was rarely used at schools as a means of professional development; lastly, school structures should be more flexible in order to make teachers participate in practices of change and schools should involve parents and wider school community in decision-making processes at school level.

The implementation of four standards-based curricula was investigated through classroom observations of and interviews with 66 secondary mathematics teachers from 12 school districts in the United States (Manouchehri & Goodman, 2001). Results indicated that there was a gap between real and ideal instructional practices of teachers almost of whom were limited by time when using materials and knowledge about mathematics content, innovative practices and their personal theories about how the implementation and the value given to the curricula were affected by the learning and teaching of mathematics and that the novice teachers who were committed to utilizing standards-based curriculum observed that standards-based curriculum had a positive effect on students' enthusiasm whereas the more experienced teachers were observed to question the worth and appropriateness of it.

McGrail (2005) conducted an interview study investigating middle and high school English language arts teachers' efforts to merge technology into the learning environment. Findings revealed that teachers described their attitudes toward technology based on whether they gained from or faced problems with their own or students' computer practices. The teachers' willingness to accept change depends on whether it would let them or students benefit much from instructional practices into which technology is integrated. However, administrators seemed to perceive technology as the ultimate goal in education and therefore they were reported to push for that kind of change in instruction.

Voogt and Pelgrum (2005) conducted a case study to investigate curriculum changes in pedagogical practices supported by information and communication technology (ICT) from 28 countries. The results of the study in which the focus was given on the curriculum content and goals of the ICT-supported pedagogical practices indicated that the curriculum content often was not new but rather was implemented in a different way; often crossing traditional limits of academic subjects.

Burns (1995) also conducted a collaborative action research study with 30 English language teacher-researchers to support curriculum change in the Australian Adult Migrant English Program and evaluate the effect of competence-based

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curriculum on classroom practice and course design. It was also aimed to determine whether a collaborative action research could eliminate the psychological effects of curriculum change on teacher-researchers. In the first phase of the study, via a network established providing communication among researchers, project organizers, and local coordinators, teacher-researchers certified their lesson planning and day-to-day decision-making in an ethnographic way. In the second phase, themes were coded into the following research areas: selecting and sequencing the content; merging grammar teaching into planning tasks and classroom processes; making competence-based evaluation; and documenting learners' perceptions of and responses to competence-based teaching. Teachers shared their findings related to above mentioned research area in group discussion that was found to make a significant contribution to teacher-researchers' professional development. Anecdotes and teachers' comments illustrated that collaborative action research method worked well to overcome psychological challenges of curriculum change since teacher-researchers involved in all processes of preparing, planning, implementing and evaluating the curriculum.

Nunan (1988) conducted a national study related to the Australian Adult Migration Education to identify curricular problems teachers have encountered due to the shift from a centralized curriculum to a learner-centered one and concluded that the most tangible result of relinquishment of a centralized curriculum was disintegration and curriculum discontinuity existed between and also within subjects.

A case study was conducted by Karavas-Doukas (1998) to investigate factors which hindered the implementation of the English language secondary school curriculum innovation in Greece through a Likert-type attitude scale, a questionnaire, and interviews. Findings revealed that the shift towards the Communicative Approach did not have any effect on teachers' beliefs; teachers did not comply with the changes occurred in instructional techniques and even used their former instructional techniques in carrying out new activities that necessitated communicative teaching techniques.

Ling (2002) conducted a qualitative longitudinal study that described the effect of a curriculum reform on two teachers' professional lives in a school in Hong

Kong. Results indicated that their professional development followed different ways due to their experiencing similar events in different ways. Both teachers became more active throughout the reform and affected the reform effort but for different reasons and in different ways: One teacher was encouraged to try the new method offered in the curriculum by reflecting on her practice whereas another was encouraged to do the same through her engagement in committee work and administration.

There are also studies investigating teachers' perceptions of curriculum change that reflect issues of power, voice, and mixed feelings about change, and that highlight the importance of training.

To begin with, Webb (2002) conducted a case study with five teachers and a school administrator at one of public primary schools in Washington, D.C., USA to investigate teachers' reasoning about practicing their autonomy. Results indicated that teachers practiced their autonomy to change curricular and assessment policies mandated by the state after determining students' academic and emotional needs and teachers utilized from professional expertise, practitioner inquiry, and pre-service teacher education to support their practice of power. He also added that both pre-service and in-service teacher education allow teachers to express their voice.

Jacob and Frid (1997) investigated secondary school teachers' and recent secondary school graduates' awareness of curriculum change in mathematics in Australia, and its effect on teaching and learning. Results revealed that the teachers were more aware than students of curricular changes, and they mostly discussed the following topics: new mathematics, research on mathematics, increased use of calculators, the end of 10th year examinations, and new subjects for 11 and 12th years. Teachers were also uncertain about curriculum change and they indicated both pre-service and in-service education were not comprehensive enough for them to implement curricular changes. Teachers criticized that their voice was not considered which resulted in inability of curriculum change. Both teachers and students indicated the significance of the teacher's personality, the negative effect of prescribed teaching, and the role of rote learning.

Another study investigating the relationship between power, gender and curriculum change conducted by Paetcher (2003) revealed that male and female teachers do not react identically to any particular change, partly due to their personal and career histories; partly due to the subjects they are keen on teaching, and partly due to their relationship to those subjects. In addition, it can not be assumed that most teachers will perceive curriculum change in the same ways as managers, policy makers or even those within school who are keen on leading and promoting change.

Such findings with regard to teacher voice are also highlighted in Allfrey (1990) who conducted four interpretive case studies of change held in schools and colleges in the UK (cited in Alwan, 2006). The case studies described different aspects of the teachers' work: adaptation of an existing curriculum, introduction of a new one, dissemination of new technologies and approaches and providing equality of opportunity and the results of those revealed that change models are more idealistic than teachers' actual experiences of change and emphasized hierarchical authoritative relationship perceived by teachers who are in relationship with their schools, and teacher involvement in curriculum planning (Allfrey, 1990, cited in Alwan, 2006).

Low-level teacher involvement in curriculum change that hindered implementation of curriculum change was reported in an empirical large-scale quantitative study in Queensland, Australia where mailed questionnaires were administered to collect the data (Elliott, Brooker, Macpherson, & McInman, 1999, cited in Alwan, 2006). Results showed that teachers engaged in curriculum leadership at a lower level as compared to administrators due to unavailability of resources and networking facilities for curriculum support, and administrative discouragement of teachers that were categorized under certain aspects of the school context which hindered teachers' engagement in curriculum change processes.

Loucks and Pratt (1979) also stated that paying attention to teachers' concerns as they begin using a new curriculum helps assure that they will use it successfully since human nature is such that changing anything is usually more difficult than maintaining the status quo. Research has shown that concerns exert a powerful influence on the implementation of reforms and determine the type of

assistance that teachers may need in the adoption process (Fullan, 1999). They have developed a model for change named the Concerns-Based Adoption Model that has evolved a systematic curriculum development process. They stressed that change entails growth in feelings and skills. In other words, individuals go through seven stages of concern as they implement change as given in the following: (1) awareness, (2) informational, (3) personal, (4) management, (5) consequence, (6) collaboration, and (7) refocusing. Results indicated that informational and personal concerns are lower whereas concerns about management and consequence have increased and different schools appear to have different profiles of concern since what the principal does is critical to the success of an implementation effort.

The results of another study conducted by Lau and Shiu (2008) about primary school teachers' concerns regarding the use of pairwork in a large scale oral assessment called Territory-wide System Assessment (TSA) which is an governmental initiative with a view of changing assessment practices in schools indicated that primary school teachers have a lack of knowledge regarding the use of pairwork in TSA which was accounted for by the resistance teachers have toward change.

The change in teachers' practices of assessment is also considered to be an important area to study because assessment is completely integrated into curriculum change. Teachers' use of three different forms of assessment – exercises as traditional assessment practices, open-ended problems and rubrics as alternative assessment practices was assessed in this study where teachers' change in assessment practices regarding educational reform in mathematics education was investigated by means of interviews and surveys (Saxe, Gearhart, Franke, Howard, & Crockett, 1999). Results revealed that 75% of the teachers utilized exercises at least two or three times a week while most of them used open-ended problems at a moderate level and rubrics ranging between rare and relatively frequently and therefore the use of exercises showed a stable trend while the use of open-ended problems and rubrics was found to rise and finally, in terms of development in teachers' using particular forms of assessment, (small / large) class sizes and teachers' (weak / heavy) workloads should be considered.

Correspondingly, Gelbal and Kelecioğlu (2007) described teachers' opinions about measurement and evaluation methods used in constructivist classrooms. The survey was administered to 242 classroom and subject teachers teaching 1st – 6th graders in primary schools in Ankara, Turkey. As findings reveal, teachers preferred traditional measurement methods such as paper-pencil tests and perceived themselves as competent with determining students' achievement although they never used pupils' self-assessment techniques. The most frequently encountered problems during the utilization of measurement tools were crowded classrooms, lack of time, and difficulty in preparing measurement tools. Most of teachers' opinions were congruent with the characteristics described in primary school curriculum. Lastly, what teachers needed in terms of use and preparation of measurement techniques was in-service teacher training.

Drake and Sherin (2006) examined when and how two urban elementary school teachers made adaptations to the reform-based mathematics curriculum. Results of this study which aimed at exploring connections between stories, that is, narrative mathematics identities and practices indicated that each of them had a distinctive pattern of adaptation while using the curriculum. Those patterns were related to three key aspects of the teachers' own experiences with mathematics: their early memories of learning mathematics, their current perceptions of themselves as mathematics learners, and their mathematical interactions with family members. Regarding teachers' experiences with mathematics, it may take time to change teachers and make them adapt changes in mathematics curriculum since curriculum change also involves teacher change (Taba, 1962). Therefore, in order to enable teachers to reflect on their practice, to interact and discuss the curriculum ideas with others, and participate in curriculum development, an ongoing curriculum change process was offered (Polettini, 1995).

Finally, according to the literature, the following can be listed to draw an accurate picture of change and curriculum change (Makhwathana, 2007): (1) curriculum changes are essential for learner-centered education, (2) curriculum changes identify the need of the target group, (3) change is not always easy and may threaten people, (4) support to educators throughout a curriculum change make it

easier to drive a change in the curriculum, (5) people must be changed from junior to senior, (6) training of educators empowers the introduction of a new curriculum, (7) teachers will go on to implement many of their own curricula if they produce necessary outcomes, (8) teachers must engage in professional development, (9) groups encourage growth and development and create a capacity to react to change, (10) change offers growth and development, (11) change also causes fear and suspicion; it challenges competence and power, it brings resistance, makes confusion and conflict and risks the loss of continuity and meaning, (12) change-related issues are ignored, denied or treated as a case for blame and defense, (13) the key to change is the attitude of educators, (14) teachers feel incompetent with skills, (15) teachers who are now part of the new system have a lack of knowledge and skills to perform in administrative roles, (16) there is a time constraint for major retraining, (17) teachers do not feel informed and ready for change.

The studies related to curriculum change in other countries were reported in brief. The following section will mention about studies on curriculum change held in Turkey.

2.5.2. Previous Studies on Curriculum Change at National Context: Curriculum Change in Turkey

Studies on curriculum development in Turkey have begun by the announcement of the Republic and they have improved systematically since 1950s. By means of Tevhid-i Tedrisat (The Law of Unification in Education) announced in 1924, all educational institutions were clustered under the auspices of Ministry of National Education and swift changes were made on school curricula. Secularization, westernization and positive sciences lay in the heart of those curricula changes (Demirel, 1992). Curriculum studies which have begun since 1924 were mostly about primary education based on the report of John Dewey who was invited to Turkey in 1924 and carried later on with studies on secondary school curriculum especially in 1953-54 (Demirel, 1992; Gözütok, 2003).

The 1924 curriculum can be considered as The 1924 Primary School Curriculum which was developed with regard to needs, circumstances of newly

constituted Turkish Republic and its glance at education (Gözütok, 2003). That curriculum was mostly supposed to be a project curriculum which was implemented for two years (Gözütok, 2003).

The 1926 Primary School Curriculum was delivered according to country's needs at that time, children's characteristics and advanced educational view all around the world (Gözütok, 2003). Having been implemented till 1936, the 1926 Primary School Curriculum consisted of six principles that are also located in current curriculum as follows: (1) overall instruction, (2) primary school's purposes, (3) specific purposes of the courses, (4) methods to be followed in instruction, (5) the method of analysis used in teaching elementary reading and writing, (6) division of five-year primary schools into two such as first period which consisted of first, second and third grades and the remaining grades as second period (Gözütok, 2003).

Considering principles of curricula implemented at schools in cities, the 1930 Village Schools Curriculum was delivered to train children living at villages according to needs and circumstances of villages (Gözütok, 2003).

The 1936 Primary School Curriculum was delivered by revising and refining the 1926 Primary School Curriculum according to needs of that time and it had been implemented till 1948 (Gözütok, 2003). By means of the 1936 Primary School Curriculum, primary schools of the Republican era made students interested in national issues by enabling them to observe and investigate vivid topics that also prevented them from memorization (Ergin, 1977). Students' developmental characteristics and overall instruction as a major method in primary schools were also considered in the 1936 Primary School Curriculum (Cicioğlu, 1985). By the way, village institutes were founded in 1940. The first formal curriculum of the village institutes was delivered in 1943 and it was changed in 1947 (Gözütok, 2003). The lessons of general culture were named again as general knowledge lessons whereas technical lessons were entitled as art lessons and workshop studies (Akyüz, 2000).

In 1944, about merging and developing curricula implemented at schools both in cities and in villages, a questionnaire was administered to all teachers (Gözütok, 2003). According to their responses, the 1936 primary school curriculum and village

schools' curriculum project were merged and developed regarding needs of that date and the 1948 Primary School Curriculum was delivered and had been implemented for 20 years (Tekışık, 1992). Due to multi-party democratic life in 1946, it can be inferred that the curriculum delivered in 1948 was almost democratic (Tazebay, Çelenk, Tertemiz, & Kalaycı, 2000). The 1948 Primary School Curriculum was different from previous curricula with that aims of National Education were clustered under four categories in terms of (1) social, (2) personal, (3) human relations and (4) economic life (Binbaşıoğlu, 1995).

The 1948 Primary School Curriculum has been critiqued since (1) there were lots of courses to be taught, (2) there were lots of units and topics to be mentioned, (3) the 1948 Primary School Curriculum was inappropriate for students' mental age and there were no connections made between courses, (4) there was no enough time devoted for topics, (5) the 1948 Primary School Curriculum was delivered based upon knowledge and there were no opportunities for making students acquire skills and gain habits, (6) it was inflexible, (7) individual differences were not considered and finally (8) it was difficult to teach in multi-grade classrooms. All of those critiques and political developments required to deliver a new curriculum (Binbaşıoğlu, 1995).

In order to develop the 1948 Primary School Curriculum and dispel deficiencies, ambiguities and difficulties in that aforementioned curriculum, Prof. Dr. Kate Wofford was invited from the USA in 1951-52. After a four-month investigation, she reported that the 1948 Primary School Curriculum should be revised. After 1950s, the concept of the 'curriculum' which has been considered as a list of courses and topics was changed to 'educational program' (Demirel, 1992). In 1952, according to her advice, a group of 25 teachers were sent to University of Florida, USA to enable them to gain ground in primary education (Gözütok, 2003). In the 5th National Education Council, in 1953, it was decided that a new curriculum that will meet the needs of that time should be designed and implemented in all schools after its implementation and development in pilot schools (Gözütok, 2003). In 1954, 25 teachers returned back and developed Tentative Curriculum for Village Pilot Schools in Bolu, Turkey. That tentative curriculum was approved by Board of

Education and Upbringing and has begun to be implemented at pilot schools in Bolu, Turkey since 1953-54. By the way, pilot school curriculum delivered by the Commission of the Pilot School Curriculum in Ataturk Girls' High School, Istanbul, Turkey in 1954-55 was considered as lead in curriculum development in secondary education (Demirel, 1992; Gözütok, 2003). The Curriculum for City and Village Pilot Schools in Istanbul, Turkey was developed by the Directorate of National Education in Istanbul in 1955 and has begun to be implemented since 1956-57. According to the Report of National Education Commission in Turkey (1959), the 1948 Primary School Curriculum should be revised and changed (cited in Gözütok, 2003). In addition, according to the Report of the Commission responsible for the Preparation of National Education Plan (1960), the 1948 Primary School Curriculum should have been changed considering psychological needs of students, instructional purposes and needs of that time (cited in Gözütok, 2003).

In 1961, 'changes to be made in primary school curriculum' were reported by the commission of 16 experts and implementers under the guidance of General Directorate of Primary Education collaborating with Board of Education and Upbringing (Gözütok, 2003). On February, 1962, the commission of 108 people, including teachers and primary school administrators working at schools in cities and villages, the Director of National Education, supervisors of primary education, teachers of secondary schools and teacher training schools, representatives of school-family collaboration and experts developed a tentative preliminary curriculum (Gözütok, 2003). Tentative preliminary curriculum was investigated by the commission of 35 experts and implementers and its last form was given and put into practice on September 12, 1962 on the condition that it should be piloted and developed for five years at some schools (Gözütok, 2003).

In 1968, a Developed Tentative Primary School Curriculum was developed by the commission of implementers, administrators, educators and experts according to the results of a six-year implementation of the 1962 tentative curriculum. After certain changes in a Developed Tentative Primary School Curriculum, the 1968 Primary School Curriculum was accepted on July 1, 1968 (Demirel, 1992). The principles of the 1968 Primary School Curriculum were clustered under familiar

environment, overall instruction, topics and units. After its implementation around Turkey, it was planned to carry on curriculum studies with regard to evaluation results of curriculum implementation and began with planning and developing secondary education curricula. However, it was not the case. Ministry of National Education was not interested in primary and secondary school curricula after the implementation of the 1968 Primary School Curriculum. Changes as preparation for and planning of the units and topics to be taught, unit and group studies, research, investigation, self-centered learning, discussion and evaluation were accepted only on paper and considered without any practice (Gözütok, 2003).

In order to develop secondary school curriculum, studies conducted at Istanbul Ataturk Girls' High School and Ankara Bahcelievler Deneme High School and preparation for Modern Science Curriculum were unsuccessful. Due to political views, curriculum planning and development studies were given up. Curriculum planning and development studies were considered as a one or two month collaborative study of teachers randomly selected from several schools and charged people from Ministry of National Education.

The Ministry of National Education designed a new curriculum model in 1982 in cooperation with academicians from several universities in order to create a sample curriculum model for the other curricula to be developed in the future (Demirel, 1992). The principles of curriculum development studies and curriculum planning were also determined. More focus was given on developing a curriculum model at that time. That model was based on developing curricula for courses according to four dimensions: (1) purposes, (2) behaviors, (3) process and (4) evaluation (Demirel, 1992).

In 1990s, in order to regulate National Education system, curriculum development and measurement and evaluation were given importance (Demirel, 1992). Development Project of National Education (1990) aimed at developing and improving curricula, evaluating textbooks' quality and instructional materials and effective use of them (Gözütok, 2003). In 1993, a new curriculum model was developed by the Educational Research and Development Directorate (ERDD). As decided by Board of Education and Upbringing, educational changes and

developments, social and individual needs, social, cultural, technological, political, economical, philosophical and psychological foundations of the curricula should be considered at international, national, regional, and also local level, when determining main purposes of the curriculum (Yıldırım, 1994, cited in Gözütok, 2003).

As cited in Gözütok (2003), Yıldırım (1994) also stated that a needs analysis was required to be conducted in order to determine individual and societal needs. Next, the title of the subjects was determined via the review of the literature, curriculum guides utilized in other countries, textbooks, and current curriculum guide. Later, goals and objectives to be acquired were stated based on each subject for each grade level. Considering goals stated, instructional strategies, methods, and techniques, instructional activities, materials, and evaluation methods and techniques were determined. Then, the lessons were planned unit by unit and were further piloted with a representative number of students and teachers at several schools. With regard to the results of the pilot study, the piloted curriculum was revised and corrected. The revised and corrected curriculum was begun to be implemented by the teachers and administrators who were informed through in-service training about the final version of the curriculum. At last, the overall curriculum was required to be evaluated (cited in Gözütok, 2003).

In both of those curriculum models, it is possible to talk about the effects of taxonomical approach. Compared to the curriculum model developed in 1982, the curriculum model developed by the ERDD indicated an accurate picture of the curriculum development process (Büyükkaragöz, 1997). Since 1998, life studies curriculum developed by the ERDD has been implemented.

Beginning from 1968 up to present, it is seen that overall primary school curriculum has not been developed yet. However, there are several curricula developed based on several courses. General characteristics of those curricula consist of desired qualifications to be observed among students, i.e. behaviors, content, educational contexts, and evaluation (Tazebay, Çelenk, Tertemiz, & Kalaycı, 2000).

Finally in 2004, primary school curriculum has been changed and developed due to the concept of 'knowledge' and developments in knowledge society,

development of instructional views based on lifelong learning and European Union (EU) norms.

As stated by Akpınar and Aydın (2007), Turkey's legislative alignment process of European Union and international educational norms, economical and technological innovations occurred in global level, looking for quality in education, current system's insufficiency to meet expectations and desire to have an educational system that contributes to economical development, and finally, unfavorable PISA (Program for International Student Assessment) 2003 and 2006 results are among those reasons behind recent educational reforms made in Turkey.

Regarding primary school curriculum change in 2004, the following should be considered (Akbaba, 2004): (1) primary education curricula were holistically analyzed by international comparisons made since 1940, (2) instead of behavioral approach, cognitive and constructivist approaches were taken into consideration, (3) instead of instruction only, people's education was given prior, (4) they were organized appropriately for eight-year compulsory primary education, (5) European Union (EU) standards and integration with the world were considered, (6) philosophical foundations of our model for training a human were constituted, (7) seven common skills were determined for all courses, (8) concept analyses were done for each course including both primary and secondary education, (9) comparisons and connections between courses were considered, (10) interdisciplines such as sports culture and olympic education, health culture, guidance and psychological counseling, career, special education, human rights and citizenship etc. were integrated into curricula, (11) the term 'acquisition' was used instead of 'behavior', (12) instead of dominant linear thought, mutual reasoning and multiple reason-multiple result approach were considered, (13) curricula were made student-centered by enriching them with activities, (14) explanations were added into curricula by means of symbols, (15) besides product-based evaluation, process-based evaluation was also given importance, and finally (16) Turkish language sensitivity was determined as a main skill of all primary education curricula.

As stated by Koç, Işıksal and Bulut (2007), recent primary school curricula that include five subject matters (i.e. Turkish language, mathematics, life sciences,

social studies, and science) were developed under the auspices of the four following foundations of curriculum development: (1) social, (2) individual, (3) economical, and (4) historical and cultural foundations. Socially, students are assumed to be individuals affected by their family, peers and teachers, schools, and other people around them (Koç, Işıksal, & Bulut, 2007).

Recent primary school curriculum was developed to guide students to adapt to the environment in which they live and aimed at enhancing students' psychological, social, moral, and cultural development at a socio-cultural context; recalling students their rights and responsibilities and raising them in accordance with family, school and government; drawing attention on social, economic and political issues all around the world, special education, democratic values and human rights, character education, and lastly physical and recreational activities for their cognitive, affective, and psychomotor development (Koç, Işıksal, & Bulut, 2007). Individually, recent primary school curriculum was developed to raise students as rapid problem-solvers of daily-life issues. Recent primary school curriculum accepted each student as a separate world considering his / her personality, provided opportunities for pupils' academic, professional and personal development; involved experiences to increase intrinsic motivation of the pupils; created environments that improve creativity, entrepreneurship, and critical thinking; drew attention on physical or psychological health and metacognitive skills (Koç, Işıksal, & Bulut, 2007). Economically, recent primary school curriculum was developed to make pupils understand rapid changes occurred in global economy. Furthermore, it involved experiences to improve national economical development; took measures to decline economical gaps between geographical regions and to supply manpower considering economical demands; encouraged pupils' entrepreneurship; and product-oriented activities (Koç, Işıksal, & Bulut, 2007). Historically and culturally, recent primary school curriculum acknowledged cultural diversities among people in the society and let pupils reflect on history and take lessons from it for the future (Koç, Işıksal, & Bulut, 2007). Additionally, it considered Ataturk's principles – Republicanism, Nationalism, Populism, Etatism, Reformism, and Secularism – and national history as a guide; drew attention on cultural, national and social norms; and provided

learning environments enriched with culture and fine arts for personal and social development (Koç, Işıksal, & Bulut, 2007).

Major elements of curriculum change in 2004 that promote personal and social development of pupils are listed as follows (Koç, Işıksal, & Bulut, 2007): effective use of the mother tongue; giving prior to cultural and aesthetic values; being motivated on reading and life long-learning; expressing ideas frankly; supporting parent involvement in schooling; effective use of at least one of foreign languages; effective use of information technologies for educational purposes; enhancing collaborative work and communication; being aware of and adapted to environmental changes; being aware of one's duties and responsibilities; having positive attitudes toward global opportunities and challenges; producing original and creative ideas on various situations; being intrinsically motivated to obey rules and regulations.

When studies about curricula change in 2004 are analyzed, it can be said that constructivist approach was considered instead of behavioral approach; the content and teaching-learning activities were organized based on multiple intelligence theory, effective learning etc.; curriculum development studies were considered as an ongoing process based on scientific foundations; knowledge based on recent scientific developments all around the world was reflected to the content; more focus was given on learner-centered model of learning and learner-centered activities; process-based evaluation was also considered (Koç, Işıksal, & Bulut, 2007).

Although recent primary school curriculum, as a result of a larger scale curriculum change in Turkey, was designed and delivered by subject matters (i.e. Turkish language, mathematics, life sciences, social studies, and science), it does not mean that teachers' perceptions constructivist curriculum change and implementation of constructivist teaching and learning activities in class will be considered subject by subject. An overall picture of perceived constructivist curriculum change and constructivist teaching and learning activities used was drawn in this study, though.

A survey study conducted by Karadağ, Deniz, Korkmaz, and Deniz (2008) investigated how classroom teachers perceived constructivism. Five-point Likert type scale which consisted of five subdimensions, namely, educational context,

implementation, in-class communication and classroom management, evaluation, and physical infrastructure, was administered to 1173 classroom teachers in Istanbul, Turkey. Results indicated that classroom teachers perceived themselves as incompetent with constructivist learning approach in terms of measurement and evaluation and physical infrastructure due to lack of instructional materials although they claimed that they had an adequate level of education and were competent with classroom management. Results also showed evidence that female classroom teachers than male classroom teachers; older classroom teachers than younger classroom teachers; more experienced teachers than less experienced ones were more competent with constructivist learning approach.

Metin and Demiryürek (2009) also stated that Turkish language teachers had difficulty in utilizing alternative measurement and evaluation methods and techniques due to lack of time, budget, and knowledge although they had positive perceptions about alternative measurement and evaluation methods and techniques.

Another study conducted by Hevedanlı, Yapıcı, Acun, Yüksel, and Alp (2009) to determine classroom teachers' views of recent primary school curriculum and problems encountered during the implementation in Diyarbakır, Turkey revealed that classroom teachers had positive ideas about recent primary school curriculum and the problem mostly encountered was stated as lack of school infrastructure.

Korkmaz (2008) also examined 210 primary school teachers' perceptions of reformed curriculum implementation via an open-ended questionnaire. The findings of this study revealed that primary school teachers generally have positive attitudes toward recently reformed curriculum and agree with the philosophical and psychological foundations of it. However, they think that textbooks of each content area should be revised. On the other hand, recently reformed curriculum is somehow difficult to be implemented due to lack of resources, crowded classrooms, parents' unawareness of recently reformed curriculum, and teachers' tiring workload.

Gömleksiz (2007) investigated teachers' perceptions of recent primary school curriculum in terms of selected variables such as grade level taught, teaching experience, and level of education. The data were collected through a 24-item scale from 982 teachers teaching in eight cities where recent primary school curriculum

was piloted. Results indicated teachers' perceptions of learning environment, recognizing, possessing, and implementing the curriculum did not differ on grade level taught and level of education. Although teachers' perceptions of recognizing the curriculum differed on teaching experience, there was no significant difference among teachers' perceptions in terms of learning environment, possessing and implementing the curriculum.

One of the studies on the content of recent primary school curriculum was conducted by Demirel (2009). She analyzed the content of recent primary school curriculum in terms of lifelong learning skills and concluded that recent primary school curriculum was comprehensive and sensitive in terms of the characteristics and skills of lifelong learning. Özensoy (2009) also conducted a study investigating how the effects of scientific and technological developments on social change were reflected to recent primary social studies curriculum. For this reason, to what extent the effects of scientific and technological developments on social change reflected in the 4, 5, 6 and 7th grade acquisitions of the learning areas of "Science, Technology, and Society" and "Production, Distribution, and Consumption" was investigated. Results indicated that the learning areas and acquisitions involved the effects of scientific and technological developments on social change but not as "Agricultural Revolution" or "Urban Revolution" as milestones of the world history or "Industrial Revolution" was mentioned under the unit of "Economy and Social Life" and the learning area of "Production, Distribution, and Consumption" in recent 7th grade primary social studies curriculum. Although the effects of scientific and technological developments on social change were included in recent primary social studies curriculum, they should be reconsidered in a comprehensive way.

A qualitative study aimed to develop different views of recent primary school curriculum related to the concept of "curriculum development" by means of metaphors developed by 106 subject teachers was conducted by Semerci (2007). Results indicated that a tree, a national team, Internet, a dream, a child whose personality has not been created yet, and a compass were metaphors developed for the concept of "curriculum development" and that teachers were worried about the development of recent primary school curriculum which meant teachers were not

told enough about recent primary school curriculum. Correspondingly, Altun and Şahin (2009) concluded that curriculum change had an effect on teachers' psychological status in different ways and therefore they should psychologically be supported and physical and infrastructural characteristics of the schools should be improved in order to implement the curriculum effectively.

Bıkmaz (2006) claimed that recent curriculum gave focus more on change but implementation of that change was considerable. Besides, she also determined what may cause teachers to misunderstand during curriculum implementation as follows: It is impossible to consider individual differences in the process of learning and teaching only by changes in instructional methods and active learning does not mean doing activities. Moreover, traditional assessment methods and techniques can also be used in addition to alternative ones and teachers should be prepared for the forthcoming lesson and in-service teacher training considering learner-centered approach should be provided.

According to Bulut (2004), the common characteristic of the curricula implemented in the U.S., Canada, Ireland and France was that students are in the heart of the curriculum, that is, they are active in the process of learning and teaching and that they argue that mathematics is a means of joy. She also claimed that former curriculum could not develop students' higher order skills and caused them to show low performance and therefore, there is a need to place students at the curriculum centre.

Yaşar, Gültekin, Türkkan, Yıldız and Girmen (2005) assessed primary school teachers' needs about recent curriculum in Eskişehir, Turkey. Results indicated that teachers believed that they need training about planning an instruction with regard to the goals, content and teaching-learning process at a "high" level. Also, they reported that there is a need for training about instructional technology and material development as well as about the measurement and evaluation. In addition, they underlined the problems that could probably occur during curriculum implementation such as lack of materials, inability to integrate materials into instructional process and lack of parents' and administrators' support for the curriculum implementation process.

Gözütok, Akgün and Karacaoğlu (2005) investigated teachers' perceptions of curriculum competence. Results showed that teachers felt very competent with the curriculum except with measurement and evaluation and their recognition of recent curriculum was claimed to be low. Additionally, teachers were observed to rate themselves higher than their actual competence with the curriculum that was inferred as an attempt of teachers to reflect themselves alike. Furthermore, there is also need for highly qualified teachers graduated from Faculty of Education in effective curriculum implementation since there were also teachers who had a major of economics or veterinary medicine teaching in public primary schools.

İşler (2008) investigated classroom and mathematics teachers' efficacy beliefs and perceptions of recent primary mathematics curriculum and whether their beliefs of efficacy and perceptions differed on their major, gender, teaching experience and the number of students in classroom. Data were collected through a questionnaire from 805 teachers teaching in Mersin, Eskişehir, Bolu, Ankara and Istanbul, Turkey. The questionnaire developed by the researcher consisted of six subdimensions as follows: Curriculum impact and utilization, curriculum impact regarding efficacy beliefs, efficacy beliefs regarding recent curriculum, curriculum utilization, use of special techniques, and teachers' sense of efficacy. MANOVA results indicated that teachers' major and experience of teaching had a significant effect on each level of the dependent variable neither did the number of students and gender. Classroom teachers had significantly stronger efficacy beliefs about recent curriculum than did mathematics teachers. Moreover, teachers with 11-15 and 21 and more years of experience were significantly reported to use more special techniques than teachers with 10 years or less experience. Similarly, teachers with 16-20 years of experience were also significantly reported to utilize special techniques than teachers with 5 years or less experience.

Çınar, Teyfur and Teyfur (2006) investigated teachers' and administrators' beliefs on the constructivist approach of recent curriculum. Teachers were found to be "undecided" with maintaining classroom discipline during curriculum implementation. Also, female teachers were found to be more aware of the activities

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planned according to constructivist approach and they expressed more pleasure on doing them.

Yanık (2008) conducted a study investigating how teachers perceived the goals and the content of English language curriculum implemented at the 6, 7 and 8th grades of public primary schools. Results of the data collected from 368 English language teachers revealed that the goals of the curriculum were accomplished at the moderate level but there were also problems encountered with the curriculum content. Teachers' perceptions differed on where their schools were located, teaching experience and educational background. Problems encountered during curriculum implementation were due to lack of resources, students, the curriculum itself and the learning environment.

Orbeyi (2007) investigated 459 classroom teachers' views of the goals, content, teaching-learning process and measurement and evaluation in Çanakkale, Edirne, and Eskişehir in the academic year of 2005-2006. She investigated whether their views differed on level of education, grade level taught, teaching experience, in-service training and the city where teaching took place. Results revealed that teachers generally agreed with the curriculum components, but they "rarely" used instructional materials due to lack of materials and teachers' habits of use. Additionally, teachers' views of the curriculum components except measurement and evaluation did not differ on their experience and level of education but, their views of measurement and evaluation differed on the city where teaching took place. For example, teachers in Eskişehir were found to have more positive ideas than teachers teaching in Çanakkale. Moreover, teachers' views of the goals and content differed on grade levels taught as follows: Teachers of 1st graders had significantly more positive ideas than those of 4th graders in terms of the goals and teachers of 1st and 5th graders had significant more positive ideas than teachers of 4th graders in terms of the content of the curriculum. Moreover, teachers who had participated in in-service training had significantly more positive ideas about the goals, content and measurement and evaluation than teachers who had not participated. Lastly, further systematic in-service trainings for teachers and an increase in collaboration among

parents, administrators, teachers, and members of Faculty of Education were recommended.

Gömleksiz and Bulut (2007) investigated views of primary school teachers of the effectiveness of recent mathematics curriculum implementation for 1-5th grades in the academic year of 2004-2005 in Istanbul, Ankara, Izmir, Kocaeli, Van, Hatay, Samsun and Bolu, Turkey. Teachers' views related to the acquisitions, content, and measurement and evaluation had significantly differed among 1st, 2nd and 5th grades with a favor of 1st grade teachers. Moreover, their views related to the goals differed on the city selected. Thus, teachers in Hatay, Samsun and Izmir had more positive ideas than teachers in Istanbul, Ankara and Kocaeli. Although there were no significant differences in terms of teaching experience and level of education, teachers' views differed on class size. Teachers in classrooms with 21-30 students had significantly more positive ideas related to the goals than those in classrooms with 31-40 and 41-50 students. Additionally, male teachers tended to find recent curriculum more effective than female teachers in terms of all components of the curriculum except teaching and learning process.

Kartallıoğlu (2005) investigated perceptions of classroom teachers of recent primary school curriculum in Bolu, Turkey. Results indicated that 25% of the teachers thought that the curriculum could be implemented in available circumstances while 75% of the teachers thought it could not be due to large class size, examination system in Turkey and lack of materials. Moreover, 52% of the teachers thought that the curriculum level is appropriate for their students. The 4-5th grade teachers generally thought that the curriculum was relevant for under-achieving students since it was simple for achieving and higher-achieving students. In addition, teachers admitted that recent curriculum aims to develop students' skills, yet not to increase their knowledge. They also stated that parents did not accept the new curriculum and they reacted in a negative way to teachers' not assigning homework to their children. Nevertheless, teachers believed the curriculum will be better since they are the implementers although their views were not taken into consideration when developing the curriculum. Teachers also admitted that they learned the curriculum by their own effort. The researcher concluded that teachers

did not understand philosophical foundations of the curriculum and suggested further in-service training. Finally, she suggested the period of pilot study should be extended to 5 years; examination system in Turkey should be congruent with recent curriculum; and to what extent teachers use alternative assessment methods and techniques should be examined.

Şentürk (2007) evaluated recent primary school curriculum with regard to views of teachers and supervisors in Amasya, Turkey. Overall results showed that primary-grade teachers "partially agreed" with the curriculum whereas supervisors "agreed." Moreover, female teachers were found to have significantly more positive ideas than male teachers. In addition, teachers aged between 20 and 30 had significantly more positive ideas related to measurement and evaluation component of the curriculum than those aged between 31 and 40. Also, teachers graduated from Faculty of Education had significantly more positive ideas in terms of the implementation component of the curriculum than those graduated from other faculties.

Özpolat, Sezer, İşgör and Sezer (2007) also investigated primary-grade teachers' views with regard to recent curriculum. Teachers stated that class size should be smaller in order to do activities better. Furthermore, they claimed that they could not effectively evaluate the activities done in the classroom, or make association among different subjects. However, teachers were found to have positive perceptions of recent curriculum. Actually, they found recent curriculum practical and thought that it could improve students' development. In conclusion, teachers generally did not perceive themselves as leaders of recent curriculum. Hence, training workshops for material development was recommended for teachers.

It seems significant to conclude with the evaluation of recent primary school curriculum (1 to 5th grades) begun to be implemented since the academic year of 2004-2005. As declared by the Board of Curriculum and Instruction Professors (2006), although recent primary school curriculum was assumed to have a potential of contributing to primary level of education, it is clear that there are some deficiencies in terms of the principles and the process of curriculum development and also serious problems encountered in curriculum implementation as follows: (1)

Curriculum change should be derived from the country's own philosophy, needs and experiences; (2) previous curriculum studies were ignored during the development of recent primary school curriculum; (3) scientific feedback on the evaluation of previous primary school curriculum was not considered in the development of recent primary school curriculum; (4) it was not true to develop a curriculum based on only one approach of education; (5) primary school curricula implemented in other countries were adapted during the development of recent primary school curriculum instead of developing primary school curricula being implemented in Turkey; (6) limitation of the development of recent primary school curriculum with a short period of time hindered curriculum studies to be considered in a whole system; (7) pilot study of recent primary school curriculum was not at a satisfactory level in terms of time and context and not evaluated in an objective way; (8) a satisfactory level in-service education was not provided for teachers before the implementation of recent primary school curriculum; (9) it is obliged to take measures by the consultation with the experts in order to meet deficiencies and solve problems encountered in curriculum development and implementation.

2.6. Summary of the Literature Review

To sum up, it is clear that several studies have been conducted on curriculum change in both international and national context. As cited in the literature, teachers, as change agents, play a significant role in implementation of the change held in curriculum. Successful implementation of proposed changes in curriculum depends on how teachers perceive and adopt that kind of curriculum change specifically and also change in general. However, teachers' perceptions of curriculum change specifically and also their receptivity to change in general are often neglected due to top-down curriculum policies.

At this point, this study is anticipated to be a contribution to the literature in terms of implying for the successful implementation of the changed curriculum via associating teachers' attitudes toward change, perceptions of constructivist curriculum change held in primary school curriculum since the academic year of

2004-2005, and their implementation of constructivist teaching and learning activities in class at primary school level.

CHAPTER 3

METHOD

This chapter provides information about the overall design of the study, sampling, instrumentation, data collection, and data analysis.

3.1. Overall Research Design

This quantitative study had a non-experimental, survey and associational research design. It was a typical correlational study that was seeking out associations among variables and aimed at explaining important human behaviors (Fraenkel & Wallen, 2006). In addition to describing classroom teachers' attitudes toward change, perceptions of constructivist curriculum change, and their implementation of constructivist teaching and learning activities in class at primary school level, the purpose of this study was to examine the relationship between classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class.

3.2. Research Questions

Research questions addressed in this study were as follows:

1. What are the attitudes of classroom teachers toward change?

2. How do classroom teachers perceive constructivist curriculum change?

3. How often do classroom teachers implement constructivist teaching and learning activities in class?

4. Is there a relationship between classroom teachers' attitudes toward change and their perceptions of constructivist curriculum change?

5. Is there a relationship between classroom teachers' attitudes toward change and their implementation of constructivist teaching and learning activities in class?

6. Is there a relationship between classroom teachers' perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class?

7. Do the relationships among classroom teachers' attitudes toward change, perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class differ according to gender, teaching experience, the faculty or school and the department graduated, grade level and the number of students in classroom taught, their involvement in in-service training (including its duration and effectiveness) about recent primary school curriculum, and their self-efficacy of its context and implementation?

3.3. Sample

The target population of this study included all classroom teachers serving at 1-5 grade levels and implementing recently changed primary school curriculum in public primary schools in Turkey. The population was so large that it was difficult to access all classroom teachers around Turkey. Thus, sampling procedures were employed. By sampling, it was considerable that the sample selected should be representative of the target population. The accessible population of this study, due to its convenience, consisted of all classroom teachers teaching in public primary schools in the city center of Afyonkarahisar, Turkey. There were 45 public primary schools in the city center of Afyonkarahisar. All of public primary schools that involved 561 classroom teachers were sampled in this study. Among all, 236 of them returned the questionnaires administered resulting in a response rate of 42%. It was required to attain a sample of at least 228 classroom teachers with regard to Cochran (1962)'s sample size formula, $n = [t^2 (PQ) / d^2] / [1+ (1/N) t^2 (PQ) / d^2]$ (cited in Balcı, 2001). According to this formula, N refers to the size of the population of interest (*N*=561) while n means the required minimum sample size. By d, the level of significance (herein d is equal to .05) is meant. Besides, t refers to values corresponding to proportions in one tail or in two tails combined (herein t = 1.96).

Finally, by (PQ), sample percentage for a maximum sample size is meant [herein (PQ) is equal to (.05) . (.05)= .25] (Cochran, 1962, cited in Balcı, 2001).

3.4. Instrumentation

The data were collected through a questionnaire consisting of 74 items and 2 open-ended questions of which first 18 items measuring attitudes toward change called "Attitude toward Change Instrument (ATCI)" were developed by Dunham, Grube, Gardner, Cummings, and Pierce (1989), and the remaining 56 items measuring perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class were developed by the researcher according to the related literature review.

The ATCI was a 5-point Likert type agreement scale ranging from 1 (strongly disagree) to 5 (strongly agree) and involved three subscales which are: (1) cognitive (i.e., cognitions about change), (2) affective (i.e., affective reactions to change), and (3) behavioral (i.e., behavioral tendency toward change). Scale scores were obtained by calculating the average of the 18 responses, such that higher scores indicated a more positive attitude toward organizational change (R. B. Dunham, J. A. Grube, D. G. Gardner, L. L. Cummings and J. L. Pierce, 1989, personal communication, November 17, 2009).

The data about perceptions of constructivist curriculum change were obtained by the next 20 items which were rated on a 5-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree) whereas the last 36 items about implementation of constructivist teaching and learning activities in class that were also rated on a 5-point Likert type scale ranging from 1 (never) to 5 (always). Items measuring perceptions of constructivist curriculum change were clustered under four predetermined categories, i.e. the student-centeredness of the curriculum, the usability of the curriculum, general views of the curriculum, and the perceptions of teachers' changed roles while items measuring implementation of constructivist teaching and learning activities in class were clustered under five predetermined categories as follows: planning, instructional process, methods, materials and evaluation.

In addition, certain questions were also asked at the outset of the questionnaire in order to obtain data about demographic characteristics of participant classroom teachers as follows: their age, gender, teaching experience, the faculty or school and the department graduated, grade level and the number of students taught in classroom, their involvement in in-service training (including its duration and effectiveness) about recent primary school curriculum, and their self-efficacy of its context and implementation.

The questionnaire administered to classroom teachers included two open-ended questions. The rationale behind those questions was to obtain in-depth information which might not be possible with the items and sustain internal validity of the research (Jaeger, 1988). Besides, by asking open-ended questions, social desirability threat which is one of the constraints of survey research was expected to be taken under control (Yıldırım & Şimşek, 2008). Actually, related review of the literature showed an evidence of that the respondents had a tendency of replying to the items without in-depth thinking (Yıldırım & Şimşek, 2008). Thus, the respondents were assumed to give more sincere responses by means of open-ended questions.

3.4.1. Development of the Instrument

Within the process of adaptation, the ATCI was translated into Turkish language considering organizational context of the school in Turkey in order to provide equivalence in terms of construct conceptualization among two versions of the instrument rather than to develop two culturally equivalent forms. Thus, the method of conceptual translation which uses the terms or phrases of the target language instrument capturing implied associations or connotative meaning of the text used in the source language instrument (Braverman & Slater, 1996) was employed. However, none of the subscales of the original scale, namely, cognitive (items 2, 5, 8, 11, 14, 17; e.g. "I usually benefit from change"), affective (items 1, 4, 7, 10, 13, 16; e.g. "I do not like change"), and behavioral (items 3, 6, 9, 12, 15, 18; e.g. "I usually hesitate to try new ideas") were considered in the data analysis. In addition to positive items, there were also negatively worded items (items 3, 4, 7, 13,

18) in the original scale and as well in the adapted form of the scale as suggested in order to take participants' response styles under control (Gable & Wolf, 1993).

The initial draft of the remaining part of the questionnaire developed by the researcher with regard to the related literature consisted of 69 items of which 31 items (items between 19 and 49; e.g. "I am aware of the new roles assigned to me by recent curriculum change") were related to perceptions of constructivist curriculum change whereas 38 items (items between 50 and 87; e.g. "I consider individual differences of my students in the process of learning and teaching") were about implementation of constructivist teaching and learning activities in class. Among 69 items, there were also negatively worded ones (items 23, 24, 27, 38, 42, 43, 57) which were expected to be reversed in the initial draft of the questionnaire.

The validity of the initial draft of the questionnaire was checked by obtaining experts' opinion and pilot testing but factor analysis was not employed. Prior to administration, the questionnaire was submitted to five experts (one professor, two associate professors, and two assistant professors) in the field of "Curriculum and Instruction" and a Turkish language instructor. They were asked to review the items of the questionnaire and to determine whether they were representative of the area of interest. Regarding their opinions, some items of the questionnaire were accordingly modified under the guidance of the thesis supervisor.

3.4.2. Pilot Study

The initial version of the questionnaire comprising 87 items was piloted with thirty-six classroom teachers sampled from the site of the study, that is, Afyonkarahisar, Turkey. After the purpose and the significance of the study had been declared, they were asked to respond to the questionnaire in a week. Later, randomly selected two teachers were interviewed and were asked to provide suggestions on the items that might cause misunderstanding and confusion. Then, reliability check and item analysis were done. Prior to reliability check, negatively worded items (items 3, 4, 7, 13, 18, 23, 24, 27, 38, 42, 43, 57) were reversed in order to let higher values indicate higher agreement and frequency.

According to the results of the reliability check, corrected item-total correlations of the items 5, 19, 23, 24, 25, 27, 28, 30, 36, 37, 38, 39, 40, 42, 47, 57, 62, and 82 in the initial version of the questionnaire were less than .3, indicating that they were measuring some other concept irrelevant to the original scale (Field, 2009). Furthermore, the results of item analysis revealed that items 5, 28, 38, 42, and 82 in the initial version of the questionnaire had item-total correlations between .20 and .29 which means that those items were marginal and needed to be revised (Crocker & Algina, 1986). Thus, wordings of the items 5, 28, 38, 42, and 82 were revised and changed in order to make it comprehensible for the participants whereas the remaining ones were deleted from the questionnaire and the final version of the questionnaire (Appendix A) was developed by the end of the pilot study.

The reliability coefficient values were found as .903 for the ATCI, the first part of the questionnaire, of which reliability coefficient had similarly been reported as .90 by Dunham, Grube, Gardner, Cummings, and Pierce (1989), .756 for the next part of the questionnaire and .94 for the last part of the questionnaire.

3.4.3. Reliability Analysis of the Final Version of the Questionnaire

Reliability is defined as the consistency of scores or responses provided by an instrument (Fraenkel & Wallen, 2006). The results of the reliability analysis conducted were displayed in Table 3.1.

Table 3.1. Reliability Analysis of the Final Version of the Questionnaire

	Cronbach's Alpha	Number of items
Attitudes Toward Change (*N=192*)	.90	18
Perceptions of Constructivist Curriculum Change (*N=203*)	.89	20
Student-Centeredness of the Curriculum	.80	5
Usability of the Curriculum	.65	3
General Views of the Curriculum	.72	5

Table 3.1 (cont'd)

	Cronbach's Alpha	Number of items
Perceptions of Teachers' Changed Roles	.69	7
Implementation of Constructivist Teaching and Learning Activities in Class (*N*=173)	.95	36
Planning	.69	3
Instructional process	.94	26
Methods	1.00	1
Materials	1.00	1
Evaluation	.67	5

All items (items between 1 and 18) of the ATCI, the initial part of the questionnaire, had item-total correlations higher than .3. The ATCI totally produced a Cronbach alpha coefficient of .90 which is a good level of internal consistency (Field, 2009). It could be assumed to indicate a high level of internal consistency since reliability should be at least .70 and preferably higher (Fraenkel & Wallen, 2006).

The next part of the questionnaire (items between 19 and 38) revealed a reliability coefficient of .885 which is considered to be high. None of the items had item-total correlations of less than .3 except for items 25 and 33 which were found to have an item-total correlation of .003 and .099 respectively. Nonetheless, the alpha coefficient of that part of the questionnaire would be .897 and .895 respectively which were higher than the calculated one if those items were deleted. Therefore, it was decided to omit items 25 and 33 in the further use of the scale. After omitting those items, the scale (except items 25 and 33) revealed a reliability coefficient of .906 which is considered to be high. The alpha coefficients of the subscales, the student-centeredness of the curriculum, the usability of the curriculum, general views of the curriculum, and the perceptions of teachers' changed roles were calculated as follows: .80, .65, .72, and .69, respectively.

The last part of the questionnaire (items between 39 and 74) had a reliability coefficient of .951 which was also considered as highly satisfactory. All of the items had item-total correlations higher than .3. The alpha coefficients of the subscales, planning, the instructional process, methods, materials, and evaluation were calculated as follows: .69, .94, 1.00, 1.00, .67, respectively.

3.5. Variables

Since this study aimed at seeking out the possible relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level, as addressed in the fourth, fifth, and the sixth research questions, it seemed necessary to define predictor and criterion variables of this study. The variable that is used to make the prediction is called the predictor variable and the variable about which the prediction is made is called the criterion variable (Fraenkel & Wallen, 2006). Regarding the fourth and fifth research questions, the predictor variable in this study was classroom teachers' attitudes toward change whereas the criterion variables were classroom teachers' perceptions and their implementation of constructivist teaching and learning activities in class at primary school level. With regard to the sixth research question, the predictor variable in this study was classroom teachers' perceptions of constructivist curriculum change whereas the criterion variable was their implementation of constructivist teaching and learning activities in class at primary school level.

3.6. Data Collection Procedures

Before conducting a study which involves human beings, it is a thumb rule that it must be reviewed by an institutional review board (IRB) at that institution. This study was reviewed by HREC (Human Research Ethical Committee) at Middle East Technical University, Ankara, Turkey. Later, official permission of the Directorate of National Education, Afyonkarahisar, Turkey was obtained before administrating questionnaires to classroom teachers in the second semester of the academic year of 2009-2010. All of the schools in the city center of Afyonkarahisar,

Turkey were visited by the researcher. At first, the administrators of the schools were informed about the purpose of the study and a copy of the official permission obtained from the Directorate of National Education, Afyonkarahisar, Turkey was left.

Since the main focus of this study is on classroom teachers, they were informed as to the nature of the study and the possible risks involved so that deception was not an ethical issue of this study and their consent was obtained for their participation. All subjects were assured that any data gathered from or about them will be held in confidence by assigning codes such as CT1 for the first classroom teacher, CT2 for the second classroom teacher and so on.

After the explanation of the purpose of the study, the questionnaire was administered to classroom teachers who were usually found in the teachers' room during a 10-minute break. Some of them were allowed to fill in the questionnaires at home due to the fact that they left the school at noon. Those were asked to leave their questionnaires in the teachers' room or principal's office when they returned their questionnaires. Some of them were met in their free hours that allowed the researcher to administer the questionnaire.

3.7. Data Analysis

The quantitative data obtained through the items were analyzed via SPSS (Statistical Package for Social Studies) for Windows™ Version 15.0 using both descriptive and inferential statistics.

Demographical data of the participants, their attitudes toward change, perceptions of constructivist curriculum change, and their implementation of constructivist teaching and learning activities in class at primary school level were briefly reported in terms of frequencies, percentages, and means, and visualized by tables or figures.

In order to examine the possible relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change, and their implementation of constructivist teaching and learning activities in class at primary school level as addressed by the fourth, fifth, and the sixth research

questions, data obtained from the questionnaire were also analyzed by means of bivariate correlations which allowed to examine pairs of relationships between variables (Field, 2009). The assumptions of bivariate correlation, normality and outliers, were also checked. The assumption of normality was checked in order to decide how to report the correlation coefficients. If the distribution is found to be normal and shows an evidence of a linear relationship, the correlation coefficient will be reported in terms of Pearson's product-moment correlation coefficient but it will be reported in terms of Kendall's tau or Spearman's rho when the distribution is not found to be normal and shows an evidence of a nonlinear relationship (Fraenkel & Wallen, 2006). Outliers were also paid attention during data analysis.

As stated by Green and Salkind (2007), a bivariate correlation can be defined as a relationship between two quantitative variables. Since this study mainly focused on determining whether there is a relationship between (1) classroom teachers' attitudes toward change and their perceptions of constructivist curriculum change, (2) classroom teachers' attitudes toward change and their implementation of constructivist teaching and learning activities in class at primary school level, and lastly (3) classroom teachers' perceptions of constructivist curriculum change and their implementation of constructivist teaching and learning activities in class at primary school level, bivariate correlations were computed. Field (2009) stated that Pearson's product-moment correlation coefficient, Spearman's rho, and Kendall's tau are examples of bivariate correlation coefficients calculated to report linear or non-linear relationships. In order to decide to use which test statistic, there are also some underlying assumptions to be satisfied.

Before computing bivariate correlations, two assumptions underlying the significance test associated with a Pearson correlation coefficient were checked:

1) The variables are bivariately normally distributed.
2) The cases represent a random sample from the population and the scores on variables for one case are independent of scores on these variables for other cases.

Independent observations can be assumed for this study as classroom teachers' scores were observed independently from each others' since the

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questionnaire was administered under the control of the researcher to classroom teachers who were usually found in the teachers' room during a 10-minute break and some of them were allowed to fill in the questionnaires at home due to the fact that they left the school at noon.

In this study, *random sampling* can not be assumed for bivariate correlations since data were collected from all classroom teachers teaching in the city center of Afyonkarahisar, Turkey, the site which was also selected due to its convenience, composed of 45 public primary schools all of which were selected.

With regard to *the assumption of bivariate normality,* Green and Salkind (2007) stated that each variable is normally distributed at all levels of the other variable ignoring it if the variables are bivariately normally distributed. They also added that the only type of statistical relationship between two variables is a linear relationship that requires the results to be described with the Pearson correlation coefficient if this assumption is met. The aforementioned assumption was satisfied by checking bivariate normality.

In order to check univariate normality, skewness (-.265, -.033, and .362) and kurtosis (1.279, .026, and -.269) values for each variable, classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change, and their implementation of constructivist teaching and learning activities in class at primary school level respectively were observed and found to be between ±2 and were approximately close to zero which provided another evidence of normality.

The significance values (.000 and .000 respectively) reported by Shapiro-Wilk and Kolmogorov-Smirnov tests (Green & Salkind, 2007) indicated that the distribution of the scores of classroom teachers' attitudes toward change were significant whereas all values of significance reported by Kolmogorov-Smirnov and Shapiro-Wilk tests (Green & Salkind, 2007) revealed no significant difference (.200 and .247 respectively) in the scores of classroom teachers with regard to their perceptions of constructivist curriculum change between a perfect normal distribution and the samples of interest (p>.05). Also, the significance values (.019 and .020 respectively) reported by Kolmogorov-Smirnov and Shapiro-Wilk tests (Green & Salkind, 2007) indicated that the distribution of the scores of classroom

teachers' implementation of constructivist teaching and learning activities in class at primary school level was significant (p<.05).

Moreover, visual inspection of histograms, Q-Q plots and box plots (except two outliers in the scores of classroom teachers' attitudes toward change and their perceptions of constructivist curriculum change and one outlier in the scores of classroom teachers with regard to implementation of constructivist teaching and learning activities in class) indicated no great deviation from normality.

Furthermore, scatterplots of all of the pairs of the aforementioned variables (Appendix B) were inspected in order to check bivariate normality. The scatterplots were observed as almost elliptical which indicates bivariate normality. Univariate outliers were also checked with box plots and 5% trimmed mean. As noted by Pallant (2007), if there are minimal differences between the actual mean and 5% trimmed mean, outliers do not have effect on the mean which was also the case for this study. Bivariate outliers were also checked by the procedure called Mahalanobis Distances which calculates the distance of particular scores from the center cluster of remaining cases. The Mahalanobis Distances score for each case is considered as an outlier if it exceeds a "critical value" which is determined by the number of the variables under investigation (Pallant, 2007). Since there were three variables under investigation, the critical value was 16.27 according to the table of the chi-square distribution (Büyüköztürk, 2005). Thus, as calculated in the column MAH_1 produced according to the data collected, there was only one case (28th) which had a higher value (33.52) than the critical value and was considered as a bivariate outlier and deleted from further analysis.

In order to analyze the open-ended data obtained from 2 questions at the end of the questionnaire, the data were firstly coded under predetermined themes considering the research questions and the items of the questionnaire. The codes under each theme were identified and attention was paid to make them appropriate for the predetermined themes. Then, data coded were reported in terms of frequencies and percentages and were displayed in tables, related to their predetermined theme. The missing responses were not taken into consideration.

3.8. Assumptions

The study is based on the following assumptions:

1. The sample reflects the target population.
2. The survey developed serves the purpose of the study.
3. The teachers who participated in the study responded to the items sincerely and impartially reflected their opinions.

3.9. Limitations of the Study

The study was limited with data collected only from classroom teachers who were teaching at public primary schools in the academic year of 2009-2010 in Afyonkarahisar, Turkey that might create a threat to external validity rather than internal validity. Selection of the site was due to its convenience and all schools in the city center of Afyonkarahisar, Turkey were sampled by cluster random sampling which may cause a threat to population generalizability. However, it was paid attention by the researcher to include information on demographic and other characteristics of the sample studied as suggested by Fraenkel and Wallen (2006).

The findings of this study may not be an accurate picture of classroom settings. They were limited to classroom teachers' perceptions of implementation of constructivist teaching and learning activities in class at primary school level and the data collected from classroom teachers were not triangulated by means of other techniques such as classroom observations and in-depth interviews. Thus, this might be a constraint that may limit the objectivity of the study. However, this constraint was assumed to be controlled by using open-ended questions at the end of the questionnaire and appropriately analyzing of the data.

This study considered only classroom teachers' attitudes toward change, perceptions of constructivist curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level as expressed by them, and other people who may also be supposed to be potentially key actors such as curriculum developers, administrators were ignored from the study.

Major limitations of this study in terms of threats to internal validity were subject characteristics, location, and mortality. The loss of classroom teachers to be participated in this study would create a threat to external validity rather than internal validity since loss of subjects may make a relationship more likely in the remaining data, that is, the correlation obtained may be increased. A location threat was also possible when a questionnaire was administered to each classroom teacher in different conditions, e.g. in the classroom, in teachers' room, in the principal's office, or at home etc. Considering the fact that some teachers left the schools at noon, it was impossible for the researcher to take circumstances under control in their homes where the questionnaires were administered. Teachers' filling in the questionnaires in a limited time and the type of assistance provided during the administration of the questionnaires were also beyond the control of the researcher that may affect and differentiate teachers' responses. When subjects' characteristics considered, classroom teachers' age, gender, teaching experience, the faculty or school and the department they graduated from, grade level and the number of students taught in classroom, their involvement in in-service training, including its duration and effectiveness about recent primary school curriculum, and their self-efficacy of its context and implementation may affect the results of this study.

Furthermore, the measures taken to assure validity and reliability of the data collection tools before administration were also assumed to minimize the other possible threats.

CHAPTER 4

RESULTS

This chapter provides information about the results of descriptive statistics and as well of the inferential statistics. The results of the inferential statistics such as bivariate correlations will further be demonstrated.

4.1. Background Characteristics of Participant Classroom Teachers

According to the results, among participant classroom teachers (N=236), 61% (n=144) of them were female whereas 39% (n=91) of them were male.

The age of classroom teachers ranged from 27 to 56. Approximately 30% (n=70) of them were aged between 37 and 41 whereas the age of approximately 28% (n=66) of them ranged from 42 to 46. Also, 14% of them (n=33) were aged between 32 and 36 while 12% of them (n=28) were 47-51 years old. 8% of them (n=18) were aged between 52 and 56. There were only four classroom teachers aged between 27 and 31 who formed the slightest portion (2%) of the sample.

When faculty participant classroom teachers graduated from is considered, it is clearly seen that 34% (n=79) of them were graduates of Faculty of Education whereas 23% of them were graduates of School of Education. Among all, 12% of them graduated from Educational Institute while 10% of them were graduates of Faculty of Open Education. Surprisingly, participants of this study working as classroom teachers were graduates of Faculty of Arts and Sciences (6%, n=13), Faculty of Economic and Administrative Sciences (3%, n=7), Faculty of Engineering (close to 3%, n=6), Faculty of Agriculture (2%, n=5), Faculty of Technical Education (.8%, n=2), Faculty of Language, History, and Geography (.8%, n=2), Faculty of Vocational Education (.4%, n=1), Faculty of Veterinary Science (.4%, n=1), and finally of Faculty of Fisheries (.4%, n=1). The graduates of the department of classroom teaching included nearly four fifths of the participants (78%). There were also classroom teachers who were graduates of other departments (21%).

Considering their teaching experience, the table displays that the majority had 10 to 16 years of experience (36%) followed by teachers with experience of 17 to 23 years (32%). The obtained data also revealed that 17% of participant classroom teachers had 24-30 years of teaching experience whereas 11% of them had 31-37 years of teaching experience. Teachers with less than 10 years of teaching experience formed approximately 3% of the participants.

More than one fifth of classroom teachers were teaching 1st and 5th graders. Among all, 19% of them were teaching 3rd graders and 18% of them were teaching 4th graders whereas 17% of them were teaching 2nd graders. When the number of students in classroom considered, 37% ($n=87$) of them stated that it ranged from 26 to 33 whereas there were between 18 and 25 students in classroom as stated by 29% ($n=69$) of them. More than one fifth of the classroom teachers (20%, $n=48$) expressed that there were between 34 and 41 students in classroom. Besides, the minority of the classroom teachers (5%, $n=11$) stated that there were between 10 and 17 students in classroom which was followed by between 42 and 49 students according to close to 3% of them ($n=7$).

More than three fourths of classroom teachers (76%, $n=179$) had participated in in-service training about recently changed primary school curriculum that lasted in 1-10 days according to nearly half of the classroom teachers (49%, $n=115$). However, 33% of the classroom teachers ($n=78$) found in-service training about recently changed primary school curriculum partially effective followed by effective (20%, $n=47$), few effective (11%, $n=27$), ineffective (10%, $n=23$), and finally very effective (1%, $n=3$). Surprisingly, more than half of the classroom teachers (57%, $n=134$) felt highly competent with recently changed primary school curriculum and one fifth of them (20%, $n=48$) had competency with recently changed primary school curriculum at a moderate level while one of them was competent with recently changed primary school curriculum at a low level and a very low level of competency with recently changed primary school curriculum was felt by only two classroom teachers.

A summary of the descriptive results corresponding to the above mentioned independent variables was presented in frequencies and percentages in Table 4.1.

Table 4.1. Demographical Background of Participant Classroom Teachers (*N*=236)

	f	*%*
Gender (*N*=235)		
Male	91	38.6
Female	144	61
Age (*N*=219)		
27-31	4	1.69
32-36	33	13.98
37-41	70	29.66
42-46	66	27.96
47-51	28	11.86
52-56	18	7.62
Faculty or school graduated from (*N*=223)		
Faculty of Education	79	33.5
School of Education	54	22.9
Educational Institute	28	11.9
Faculty of Open Education	24	10.2
Faculty of Arts and Sciences	13	5.5
Faculty of Econ. and Administrative Sciences	7	3
Faculty of Engineering	6	2.5
Faculty of Agriculture	5	2.1
Faculty of Technical Education	2	.8
Faculty of Language, History, and Geography	2	.8
Faculty of Vocational Education	1	.4
Faculty of Veterinary Science	1	.4
Faculty of Fisheries	1	.4
Department graduated (*N*=234)		
Classroom teaching	185	78.4
Other	49	20.8
Teaching experience (*N*=233)		
3-9 years	6	2.54
10-16 years	86	36.44
17-23 years	75	31.77
24-30 years	40	16.94
31-37 years	26	11.01
Grade level taught (*N*=222)		
1st grade	48	20.3
2nd grade	40	16.9
3rd grade	44	18.6
4th grade	42	17.8
5th grade	48	20.3
# of students in classroom (*N*=222)		
10-17	11	4.66
18-25	69	29.23
26-33	87	36.86

Table 4.1 (cont'd)

	f	*%*
# of students in classroom (*N*=222)		
34-41	48	20.33
42-49	7	2.96
In-service training about recently changed primary school curriculum (*N*=231)		
Participated in	179	75.8
Not participated in	52	22
Duration of in-service training (*N*=143)		
Not recalled	8	3.38
1-10 days	115	48.72
11-20 days	13	5.5
21-30 days	3	1.27
31-40 days	4	1.69
Effectiveness of in-service training (*N*=178)		
Very effective	3	1.3
Effective	47	19.9
Partially effective	78	33.1
Few effective	27	11.4
Ineffective	23	9.7
Level of competency with recently changed primary school curriculum (*N*=222)		
Very high	37	15.7
High	134	56.8
Moderate	48	20.3
Low	1	.4
Very low	2	.8

N for each item may vary due to missing responses

Although the data were collected from 236 classroom teachers, further statistical analyses were conducted considering the data obtained from 219 of them since questionnaires including missing values and the similar responses even given for the reversed items of the questionnaire were eliminated.

4.2. Classroom Teachers' Attitudes Toward Change

As addressed by the first research question, Table 4.2 displays information about classroom teachers' attitudes toward change.

According to Table 4.2, the descriptive analysis of the data indicated that classroom teachers agreed with the statements measuring attitudes toward change

(*M*=4.06, *SD*=.482) according to the intervals determined by the researcher as follows: 5-4.21 as "strongly agree", 4.20-3.41 as "agree", 3.40-2.61 as "uncertain", 2.60-1.81 as "disagree", and 1.80-1 as "strongly disagree".

Table 4.2. Classroom Teachers' Attitudes Toward Change

Statements on Attitudes	SA	A	U	D	SD	*M*	*N*
I look forward to change at school.	45.2	45.7	4.6	4.1	0.0	4.33	218
Change benefits the school.	44.7	49.8	3.2	1.8	0.0	4.38	218
I resist new ideas.	1.8	3.2	4.1	55.3	34.2	4.19**	216
I do not like change.	0.9	6.8	3.7	51.1	36.5	4.17**	217
Most of my colleagues benefit from change.	21.0	58.4	14.2	2.7	1.4	3.97	214
I am inclined to try new ideas.	28.3	60.3	2.7	5.0	1.8	4.10	215
Change frustrates me.	0.5	5.5	6.4	57.1	27.4	4.09**	212
Change often helps me perform better.	21.5	59.8	11.0	2.7	3.2	3.95	215
I always support new ideas.	34.7	57.1	4.6	2.3	0.9	4.23	218
Changes tend to stimulate me.	29.2	62.6	5.0	0.9	1.4	4.18	217
Other people think that I support change.	16.4	60.3	16.9	3.2	0.9	3.90	214
I often suggest new approaches to things.	21.5	67.6	6.4	2.7	0.0	4.10	215
Most changes are irritating.	1.4	6.4	9.6	60.3	20.1	3.93**	214
Change usually helps improve unsatisfactory situations at school.	16.9	57.1	15.1	9.6	0.5	3.81	217
I intend to do whatever possible to support change.	20.1	61.6	12.8	2.3	1.4	3.99	215

Table 4.2 (cont'd)

Statements on Attitudes	SA	A	U	D	SD	*M*	*N*
I find most changes to be pleasing.	13.7	61.6	16.9	4.6	1.4	3.83	215
I usually benefit from change.	17.8	70.3	5.9	3.2	0.9	4.03	215
I usually hesitate to try new ideas.	1.8	8.7	8.2	60.3	21.0	3.90**	219

* SA= Strongly agree, A= Agree, U= Uncertain, D= Disagree, SD=Strongly disagree.
** Mean scores calculated after reversing the item

The majority of the teachers strongly agreed that change benefits the school (M=4.38, SD=.642), they look forward to change at school (M=4.33, SD=.749), and they always support new ideas (M=4.23, SD=.720). A little more than 90% of them agreed that changes tend to stimulate them (M=4.18, SD=.689) while a little less than 90% of them agreed that they are inclined to try new ideas (M=4.10, SD=.825), they often suggest new approaches to things (M=4.10, SD=.623), and they usually benefit from change (M=4.03, SD=.676). A little more than four fifths of classroom teachers also agreed with the following statements: "I intend to do whatever possible to support change." (M=3.99, SD=.746) and "Change often helps me perform better." (M=3.95, SD=.858). Besides, approximately 80% of them agreed that most of their colleagues benefit from change (M=3.97, SD=.775). The statements classroom teachers least agreed with were as follows: "Other people think that I support change." (M=3.90, SD=.741), "I find most changes to be pleasing." (M=3.83, SD=.773), and lastly "Change usually helps improve unsatisfactory situations at school." with a mean of 3.81 and a standard deviation of .848.

However, approximately 90% (disagreeing or strongly disagreeing) of classroom teachers disagreed that they resist new ideas (M=4.19, SD=.809). More than four fifths (disagreeing or strongly disagreeing) of classroom teachers also disagreed that they do not like change (M=4.17, SD=.861), change frustrates them (M=4.09, SD=.783), most changes are irritating (M=3.93, SD=.831) and lastly they usually hesitate to try new ideas (M=3.90, SD=.893).

4.3. Classroom Teachers' Perceptions of Constructivist Curriculum Change

As addressed by the second research question, Table 4.3 displays information about classroom teachers' perceptions of constructivist curriculum change. The descriptive analysis of the data indicated that classroom teachers were generally uncertain about the statements measuring perceptions of constructivist curriculum change (*M*=3.38, *SD*=.524) according to the intervals determined by the researcher as follows: 5-4.21 as "strongly agree", 4.20-3.41 as "agree", 3.40-2.61 as "uncertain", 2.60-1.81 as "disagree", and 1.80-1 as "strongly disagree."

When the subscales of perceptions of constructivist curriculum change considered, approximately 60% of classroom teachers agreed with the items clustered under the subscale of "student-centeredness" (*M*=3.56, *SD*=.679). A little more than half of them agreed with the items clustered under the subscale of "usability" (*M*=3.48, *SD*=.682) while a little less than half of them were uncertain about the items clustered under the subscale of "general views" (*M*=3.00, *SD*=.709). Finally, close to 65% of them agreed with the items categorized under the subscale of "perception of changed roles" (*M*=3.65, *SD*=.545).

A little more than four fifths of classroom teachers agreed that they are aware of their new roles assigned with recent curriculum changes (*M*=3.88, *SD*=.634). Approximately 75% of them agreed with the following statement: "I think I have a key role in implementing recent curriculum changes." (*M*= 3.82, *SD*=.793) while a little less than 75% of them found recent curriculum changes to be positive (*M*=3.80, *SD*=.844) and agreed that recently changed curriculum is student-centered (*M*=3.76, *SD*=.815) and that recently changed curriculum tends to be implemented (*M*=3.72, *SD*=.816). About 70% of classroom teachers found approaches such as multiple intelligence theory and practices, problem-based learning, project-based learning etc. in recently changed curriculum applicable (*M*=3.68, *SD*=.779). Also, almost 65% of them agreed that learning experiences in recently changed curriculum help students solve their daily-life problems (*M*=3.61, *SD*=.875). A little more than 60% of them agreed that they implement recent curriculum changes successfully (*M*=3.56, *SD*=.777) and reflect recent curriculum changes successfully to classroom practices

(*M*=3.52, *SD*=.873) although more than one fifth of them were uncertain about those two statements.

The statements classroom teachers least agreed with were as follows: "I think students' individual differences are considered in recent curriculum changes." (*M*=3.51, *SD*=.940), and lastly "I think recent curriculum changes meet students' needs." with a mean of 3.50 and a standard deviation of .922.

However, close to one fourth of classroom teachers felt uncertain about the effectiveness of in-service education about recent curriculum changes (*M*=3.37, *SD*=.989). A little less than 20% of them were uncertain about students' learning by inquiry as suggested in recently changed curriculum (*M*=3.34, *SD*=1.000). Approximately one fourth of them felt uncertain whether measurement and evaluation methods and techniques such as self-, peer-, and group evaluation, performance evaluation, portfolios and projects etc. suggested in recently changed curriculum are appropriate (*M*=3.16, *SD*=1.080). A little more than 30% of classroom teachers were not sure about whether recent curriculum changes can be implemented at country level (*M*=3.05, *SD*=1.041). A little less than 30% of classroom teachers were not sure about whether recent curriculum changes reflect teachers' perceptions and needs (*M*=2.98, *SD*=1.051). Finally, a little more than one fourth of them were uncertain about fully determination of regional and local needs in recent curriculum change (*M*=2.73, *SD*=1.043).

However, close to 70% of classroom teachers found proper curriculum changes to be inappropriate (*M*=2.31, *SD*=1.065).

Table 4.3. Classroom Teachers' Perceptions of Constructivist Curriculum Change

Statements on Perceptions	SA	A	U	D	SD	*M*	*N*
Student-Centeredness of the Curriculum							
I think recent curriculum changes meet students' needs.	9.6	47.9	26.5	13.2	2.3	3.50	218
I think students' individual differences are considered in recent curriculum changes.	6.8	58.4	16.4	15.1	3.2	3.51	219

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Table 4.3 (cont'd)

Statements on Perceptions	SA	A	U	D	SD	*M*	*N*
Student-Centeredness of the Curriculum							
I think learning experiences in recently changed curriculum help students solve their daily-life problems.	9.6	55.3	22.8	9.6	2.3	3.61	218
I think students understand knowledge by inquiry in recently changed curriculum.	6.8	48.9	18.7	21.9	3.2	3.34	218
I think recently changed curriculum is student-centered.	11.9	63.0	13.2	10.5	0.5	3.76	217
Usability of the Curriculum							
I think recent curriculum changes can be implemented at country level.	6.4	30.6	31.5	24.7	6.8	3.05	219
I find approaches (multiple intelligence theory, problem-based learning etc.) in recently changed curriculum applicable.	8.2	61.2	21.0	8.2	0.9	3.68	218
I think recently changed curriculum tends to be implemented.	9.1	65.3	14.2	9.6	1.4	3.72	218
General Views of the Curriculum							
I find recent curriculum changes positive.	14.6	59.8	15.5	6.8	1.8	3.80	216
I think recent curriculum changes reflect teachers' perceptions and needs.	4.6	32.0	28.3	26.9	8.2	2.98	219
I think regional and local needs are completely determined in recent curriculum changes.	3.2	23.3	25.6	35.6	10.5	2.73	215
I find proper curriculum changes appropriate.	3.2	14.6	12.3	47.5	21.0	2.31	216
I find measurement and evaluation methods and techniques in recently changed curriculum appropriate.	5.9	41.6	23.7	20.5	8.2	3.16	219
Perceptions of Changed Roles							
I think I have a key role in implementing recent curriculum changes.	14.6	60.7	15.1	7.8	0.5	3.82	216

Table 4.3 (cont'd)

Statements on Perceptions	SA	A	U	D	SD	*M*	*N*
Perceptions of Changed Roles							
I think I reflect recent curriculum changes successfully to classroom practices.	6.8	54.3	22.8	12.8	1.8	3.52	216
I think in-service education makes it easier to understand recent curriculum changes.	7.3	48.4	22.8	17.4	4.1	3.37	219
I implement recent curriculum changes successfully.	3.7	56.6	21.5	10.0	0.9	3.56	203
I am aware of my new roles assigned with recent curriculum changes.	9.6	72.1	14.2	2.3	0.9	3.88	217

* SA= Strongly agree, A= Agree, U= Uncertain, D= Disagree, SD=Strongly disagree.

4.4. Classroom Teachers' Implementation of Constructivist Teaching and Learning Activities in Class at Primary School Level

As addressed by the third research question, Table 4.4 displays information about classroom teachers' implementation of constructivist learning and teaching activities in class at primary school level. The descriptive analysis of the data indicated that classroom teachers often implement constructivist learning and teaching activities in class at primary school level in general (M=4.18, SD=.399) according to the intervals determined by the researcher as follows: 5-4.21 as "always", 4.20-3.41 as "often", 3.40-2.61 as "sometimes", 2.60-1.81 as "seldom", and 1.80-1 as "never".

When the subscales of implementation of constructivist learning and teaching activities in class at primary school level considered, approximately 30% of classroom teachers always implemented the items clustered under the subscale of "planning" (M=4.22, SD=.490). The majority of them (close to 75%) often implemented the items clustered under the subscale of "instructional process" (M=4.18, SD=.406) while approximately 60% of them often implemented the items clustered under the subscale of "methods" (M=4.05, SD=.676) and the subscale of

"materials" (*M*=4.03, *SD*=.673). Finally, a little more than 70% of them often implemented the items categorized under the subscale of "evaluation" (*M*=4.08, *SD*=.453).

The majority of classroom teachers (close to 60%) always encouraged their students to be actively participated in the lesson (*M*=4.56, *SD*=516) and approximately half of them always asked questions to their students to assess what learned in the classroom (*M*=4.44, *SD*=.550). Also, about 45% of them always gave enough time to make their students think after asking a question (*M*=4.40, *SD*=553) and about 40% of them always related their students' opinions to the topic taught (*M*=4.35, *SD*=.573). A little more than 40% of classroom teachers always planned the lesson according to recently changed curriculum (*M*=4.35, *SD*=.607) while a little less than 40% of them always let their students compare each others' opinions about the topic (*M*=4.34, *SD*=.591). Also, a little more than 40% of classroom teachers always considered their students' individual differences in the teaching-learning process (*M*=4.32, *SD*=.633) while close to 40% of them always asked students' prior knowledge related to the topic to be taught (*M*=4.27, *SD*=.634). A little more than 30% of them always guided their students to the problems drawing attention to the topic (*M*=4.27, *SD*=.572) whereas a little more than 40% of them always cooperated with their colleagues in order to implement recently changed curriculum effectively (*M*=4.26, *SD*=.730). A little more than 30% of classroom teachers always guided their students to enable them to relate what learned in different subjects (*M*=4.25, *SD*=.602), provided their students to draw relationships between subjects (*M*=4.25, *SD*=.612), utilized their students' opinions to enrich the lessons (*M*=4.23, *SD*=.601) and lastly guided their students to enable them to access knowledge by research (*M*=4.22, *SD*=.627).

Besides, the majority of classroom teachers (a little more than 60%) often encouraged their students to criticize each other's opinions (*M*=4.18, *SD*=.608). A little more than half of them often encouraged their students to ask questions to each other (*M*=4.17, *SD*=.695) and discuss about the topic (*M*=4.16, *SD*=.724). A great deal of classroom teachers (about 68%) often did activities providing their students to practice what learned (*M*=4.15, *SD*=.626) while about 65% of them often provided

their students to share their experiences with their peers (*M*=4.15, *SD*=.592). About 55% of them often included activities in their lesson plans to make their students active (*M*=4.14, *SD*=.682). A little less than half of them often evaluated themselves at the end of the teaching-learning process (*M*=4.13, *SD*=.787). More than 60% of classroom teachers often planned the instruction considering students' individual differences (*M*=4.13, *SD*=.651), provided students to learn by the investigation of different viewpoints of a topic *(M*=4.13, *SD*=.615), provided students learning experiences that will develop higher order thinking skills such as problem solving, and reasoning (*M*=4.11, *SD*=.606), gave students homework providing them to utilize knowledge learned to solve daily-life problems (*M*=4.08, *SD*=.600) and finally took measures to assess what students have learned in a day (*M*=4.04, *SD*=.606). About 60% of them often used terms related to higher order thinking skills (classify, analyze, guess, comprehend etc.) in the classroom (*M*=4.09, *SD*=.716), tried to meet students' different learning needs by means of different instructional strategies, methods, and techniques such as discovery learning, creative drama, and projects etc. (*M*=4.05, *SD*=.676), adapted the lesson according to students' interests (*M*=4.04, *SD*=.713), used real or model materials or resources in classroom (*M*=4.03, *SD*=.673), and organized activities that allow students to learn by discovery (*M*=4.02, *SD*=.680). A little less than half of them often encouraged students to work in groups by cooperation (*M*=4.06, *SD*=.729).

The statements classroom teachers rarely did were as follows: "I let students guide the lesson such as by determining the content and instructional strategies." (*M*=3.95, *SD*=.720), "I decide learning goals through discussing with the students." (*M*=3.87, *SD*=.771), "I utilize students' confusion as a source of learning." (*M*=3.79, *SD*=.769) and lastly "I use alternative assessment methods (e.g. self-, peer-, group evaluation, and portfolios etc.)." with a mean of 3.70 and a standard deviation of .875.

Table 4.4. Classroom Teachers' Implementation of Constructivist Teaching and Learning Activities (CTLA) in Class

Statements on Implementation of CTLA	A	O	ST	S	N	*M*	*N*
Planning							
I include activities in my lesson plans to make my students active.	30.1	53.9	14.2	0.9	0.0	4.14	217
I plan the instruction considering my students' individual differences.	26.0	63.0	8.7	2.3	0.0	4.13	219
I plan the lesson according to recently changed curriculum.	40.2	53.0	4.1	0.9	0.0	4.35	215
Instructional Process							
I encourage my students to be actively participated in the lesson.	56.6	42	0.9	0.0	0.0	4.56	218
I relate my students' opinions to the topic taught.	38.4	58.9	2.3	0.0	0.5	4.35	219
I let my students compare their opinions about the topic.	38.8	51.6	5.9	0.0	0.0	4.34	211
I encourage my students to work in groups by cooperation.	28.8	47.9	22.4	0.5	0.0	4.06	218
I use terms related to higher order thinking skills in the classroom.	27.9	54.3	16.0	0.9	0.5	4.09	218
I give enough time to make my students think after asking a question.	43.4	53.0	3.2	0.0	0.0	4.40	218
I encourage my students to ask questions to each other.	33.8	50.2	15.5	0.5	0.0	4.17	219
I encourage my students to discuss about the topic.	33.3	50.2	13.7	1.8	0.0	4.16	217
Before teaching a topic, I ask students' prior knowledge related to that topic.	37.0	53.9	8.7	0.5	0.0	4.27	219
I let my students guide the lesson (e.g. determining the content and instructional strategies)	21.0	54.8	21.5	2.3	0.0	3.95	218
I guide my students to the problems drawing attention to the topic.	31.5	56.2	5.9	0.0	0.0	4.27	205

Table 4.4 (cont'd)

Statements on Implementation of CTLA	A	O	ST	S	N	*M*	*N*
Instructional Process							
I guide my students to make them relate what they have learned in different lessons.	32.9	58.9	7.3	0.5	0.0	4.25	218
I utilize my students' opinions to enrich the lessons.	31.5	58.4	9.1	0.0	0.0	4.23	217
I adapt the lesson according to students' interests.	24.7	55.7	16.4	2.3	0.0	4.04	217
I organize activities that let my students discover knowledge.	22.4	58.9	17.8	0.5	0.5	4.02	219
I provide my students learning experience that will develop higher order thinking skills.	24.2	63.5	11.9	0.5	0.0	4.11	219
I provide my students to draw relationships between subjects.	32.9	56.6	7.8	0.5	0.0	4.25	214
I guide my students to make them obtain knowledge by investigation.	31.1	59.8	6.8	1.4	0.0	4.22	217
I consider my students' individual differences in learning-teaching process.	40.2	51.6	7.8	0.5	0.0	4.32	219
I cooperate with my colleagues in order to implement recently changed curriculum effectively.	41.1	45.2	12.8	0.5	0.5	4.26	219
I utilize students' confusion as a source of learning.	16.0	51.1	28.3	3.7	0.5	3.79	218
I encourage my students to criticize their opinions.	28.8	61.2	9.6	0.5	0.0	4.18	219
I decide learning goals by discussing them with my students.	17.4	58.0	17.8	6.4	0.0	3.87	218
I provide students to learn by investigating different viewpoints of a topic.	24.2	66.2	7.8	1.8	0.0	4.13	219
I do activities that provide my students to practice what they have learned.	25.1	66.7	6.4	1.4	0.5	4.15	219
I provide my students to share their experiences with their peers.	25.6	63.9	9.6	0.5	0.0	4.15	218

Table 4.4 (cont'd)

Statements on Implementation of CTLA	A	O	ST	S	N	*M*	*N*
Methods							
I try to meet my students' different learning needs via different instructional strategies, methods, and techniques.	23.3	59.8	15.1	1.8	0.0	4.05	219
Materials							
I utilize real or model materials or resources in the classroom.	22.4	58.4	16.9	1.4	0.0	4.03	217
Evaluation							
I give my students homework providing them to use knowledge to solve daily-life problems.	22.4	63.5	14.2	0.0	0.0	4.08	219
I ask questions to my students to assess what learned in the classroom.	46.6	50.2	2.7	0.0	0.0	4.44	218
I take measures to assess what my students have learned in a day.	19.6	64.4	15.1	0.5	0.0	4.04	218
I evaluate myself at the end of the learning-teaching process.	31.5	49.3	11.9	2.3	0.9	4.13	210
I use alternative assessment methods (e.g. self-, peer-, group evaluation, and portfolios)	15.1	49.3	27.4	5.5	2.3	3.70	218

* A= Always, O= Often, ST= Sometimes, S= Seldom, N=Never.

4.5. Relationship Between Attitudes Toward Change and Perceptions of Constructivist Curriculum Change

As addressed by the fourth research question, in order to determine whether classroom teachers' attitudes toward change correlate with their perceptions of constructivist curriculum change and also with its subscales, correlation coefficients were computed.

The attitudes of classroom teachers toward change were significantly but not strongly correlated with the perceptions of constructivist curriculum change, $r=.30$,

$p<.01$. Thus, it can be concluded that 9% of the variance ($.30^2$) of the perceptions of constructivist curriculum change is accounted for by its linear relationship with the attitudes toward change. The results suggest that classroom teachers tend to state that they are open to perceive constructivist curriculum change if they say that they are open to change.

Since the scale of perceptions of constructivist curriculum change consisted of four subscales, student-centeredness, usability, general views and perceptions of changed roles, correlations with the attitudes toward change were computed for each subscale. Using the Bonferroni approach to control for Type I error across 4 correlations, a p value of less than .0125 (.05/4=.0125) was required for significance. The results of the correlations between variables from two different sets are presented in Table 4.5.

Table 4.5. Correlations of Attitudes Toward Change with Each Subscale of Perceptions of Constructivist Curriculum Change

	Student-centeredness (N=214)	Usability (N=216)	General views (N=208)	Perceptions of changed roles (N=197)
Attitudes (N=177)	.404*	.257*	.174	.331*

* $p< .0125$

The results of the correlational analyses presented above indicate that only three of the 4 correlations were statistically significant, but not strong except for the student-centeredness subscale. The student-centeredness subscale of perceptions of constructivist curriculum change was significantly correlated with the attitudes toward change, $r=.40$, $p<.0125$. For the student-centeredness subscale, the relationship can be assessed as "moderate." Thus, it can be concluded that 16% of the variance ($.40^2$) of the student-centeredness subscale of perceptions of constructivist curriculum change is accounted for by its linear relationship with the attitudes toward change. Also, the perceptions of changed roles subscale of perceptions of constructivist curriculum change was significantly correlated with the attitudes toward change, $r=.33$, $p<.0125$. Thus, it can be concluded that 11% of the variance ($.33^2$) of the the perceptions of changed roles subscale of perceptions of

constructivist curriculum change is accounted for by its linear relationship with the attitudes toward change. Finally, the usability subscale of perceptions of constructivist curriculum change was significantly correlated with the attitudes toward change, $r=.26$, $p<.0125$. Thus, it can be concluded that 6.8% of the variance ($.26^2$) of the usability subscale of perceptions of constructivist curriculum change is accounted for by its linear relationship with the attitudes toward change. However, the correlations of the general views subscale of perceptions of constructivist curriculum change with the attitudes toward change ($r=.17$, $p>.0125$, ns) tended to be lower and not significant.

Generally, the results suggest that classroom teachers tend to state that they are open to perceive curriculum change as a student-centered curriculum change, they are open to perceive their changed roles and the implementability of recent curriculum change if they say that they are open to change but it seems that it is not the case for the general views about constructivist curriculum change.

4.6. Relationship Between Attitudes Toward Change and Implementation of Constructivist Teaching and Learning Activities in Class

As addressed by the fifth research question, in order to determine whether classroom teachers' attitudes toward change correlate with their implementation of constructivist teaching and learning activities in class at primary school level, correlation coefficients were computed.

The attitudes of classroom teachers toward change were significantly but not strongly correlated with the implementation of constructivist curriculum change, $r=.25$, $p<.01$. Thus, it can be concluded that 6.25% of the variance ($.25^2$) of the implementation of constructivist teaching and learning activities in class at primary school level is accounted for by its linear relationship with the attitudes toward change. The results suggest that classroom teachers tend to state that they are open to implementation of constructivist teaching and learning activities in class at primary school level if they say that they are open to change.

Since the scale of implementation of constructivist teaching and learning activities in class at primary school level consisted of five subscales, planning,

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instructional process, methods, materials, and evaluation, correlations with the attitudes toward change were computed for each subscale. Using the Bonferroni approach to control for Type I error across 5 correlations, a *p* value of less than .01 (.05/5=.01) was required for significance. The results of the correlations between variables from two different sets are presented in Table 4.6.

Table 4.6. Correlations of Attitudes Toward Change with Each Subscale of Implementation of Constructivist Teaching and Learning Activities in Class

	Planning (*N*=212)	Instructional process (*N*=178)	Methods (*N*=218)	Materials (*N*=216)	Evaluation (N=206)
Attitudes (*N*=177)	.195	.270*	.236*	.312*	.193

* *p* < .01

The results of the correlational analyses presented above indicate that only three of the 5 correlations were statistically significant, yet not strong. The materials subscale of implementation of constructivist teaching and learning activities in class at primary school level was significantly correlated with the attitudes toward change, *r*=.31, *p*<.01. Thus, it can be concluded that 9.6% of the variance (.31²) of the materials subscale of implementation of constructivist teaching and learning activities in class at primary school level is accounted for by its linear relationship with the attitudes toward change. Also, the instructional process subscale of implementation of constructivist teaching and learning activities in class at primary school level was significantly correlated with the attitudes toward change, *r*=.27, *p*<.01. Thus, it can be concluded that 7.3% of the variance (.27²) of the instructional process subscale of implementation of constructivist teaching and learning activities in class at primary school level is accounted for by its linear relationship with the attitudes toward change. Finally, the methods subscale of implementation of constructivist teaching and learning activities in class at primary school level was significantly correlated with the attitudes toward change, *r*=.24, *p*<.01. Thus, it can be concluded that 5.8% of the variance (.24²) of the methods subscale of implementation of constructivist teaching and learning activities in class at primary school level is accounted for by its linear relationship with the attitudes toward change. However, the correlations of the planning subscale of implementation of

constructivist teaching and learning activities in class at primary school level with the attitudes toward change (r=.20, p>.01, ns) and the correlations of the evaluation subscale of implementation of constructivist teaching and learning activities in class at primary school level with the attitudes toward change (r=.19, p>.01, ns) tended to be lower and not significant.

Generally, the results suggest that classroom teachers tend to slightly state that they are open to implementation constructivist teaching and learning activities in class with regard to the instructional process, methods and materials if they say that they are open to change but it seems that it is not the case for the planning and evaluation suggested by constructivist curriculum change.

4.7. Relationship Between Perceptions of Constructivist Curriculum Change and Implementation of Constructivist Teaching and Learning Activities in Class

As addressed by the sixth research question, in order to determine whether classroom teachers' perceptions of constructivist curriculum change correlate with their implementation of constructivist teaching and learning activities in class, correlation coefficients were computed.

The results of the correlational analyses presented above display that classroom teachers' perceptions of constructivist curriculum change is slightly related to their implementation of constructivist teaching and learning activities in class, with a coefficient of r=.301, which is also significant at p<.01. Thus, it can be concluded that 9.06% of the variance (.301²) of the implementation of constructivist teaching and learning activities in class variable is accounted for by its linear relationship with the perceptions of constructivist curriculum change. Generally, the results suggest that classroom teachers tend to slightly state that they are open to implementation of constructivist teaching and learning activities in class if they say that they are open to perceive constructivist curriculum change which all means that the more thoroughly they perceive, the more frequently they implement constructivist teaching and learning activities in class.

Since the scale of perceptions of constructivist curriculum change consisted of four subscales, student-centeredness, usability, general views and perceptions of

changed roles, and the scale of implementation of constructivist teaching and learning activities in class consisted of five subscales, planning, instructional process, methods, materials, and evaluation, correlations among those subscales were also computed. Using the Bonferroni approach to control for Type I error across 20 correlations, a *p* value of less than .0025 (.05/20=.0025) was required for significance. The results of the correlations among those subscales are presented in Table 4.7.

Table 4.7. Correlations among the Subscales of Perceptions of Constructivist Curriculum Change and the Subscales of Implementation of Constructivist Teaching and Learning Activities in Class

		Planning	Instructional process	Methods	Materials	Evaluation
Student-centeredness	Pearson Correlation	.199	.242*	.184	.191	.242*
	Sig. (2-tailed)	.004	.001	.007	.005	.000
	N	208	175	214	212	204
Usability	Pearson Correlation	.156	.195	.091	.140	.175
	Sig. (2-tailed)	.024	.009	.184	.041	.012
	N	210	177	216	214	204
General views	Pearson Correlation	.168	.224	.149	.163	.224*
	Sig. (2-tailed)	.017	.003	.031	.019	.002
	N	203	172	208	206	197
Perceptions of changed roles	Pearson Correlation	.233*	.276*	.217*	.262*	.256*
	Sig. (2-tailed)	.001	.000	.002	.000	.000
	N	192	160	197	196	187

*p<.0025

The results of the correlational analyses presented above indicate that only eight of the 20 correlations were statistically significant. However, the level of those correlations ranged from slight to moderate, but not strong. The perceptions of changed roles subscale of perceptions of constructivist curriculum change was

significantly correlated with all subscales of implementation of constructivist teaching and learning activities in class, with the planning subscale, $r=.23$, $p<.0025$; with the instructional process subscale, $r=.28$, $p<.0025$; with the methods subscale, $r=.22$, $p<.0025$; with the materials subscale, $r=.26$, $p<.0025$; and lastly with the evaluation subscale, $r=.26$, $p<.0025$. Thus, it can be concluded that 5.3% of the variance ($.23^2$) of the planning subscale, 7.8% of the variance ($.28^2$) of the instructional process subscale, 4.8% of the variance ($.22^2$) of the methods subscale, 6.9% ($.262^2$) of the variance of the materials subscale, and 6.6% of the variance ($.256^2$) of the evaluation subscale of implementation of constructivist teaching and learning activities in class are accounted for by its linear relationship with the perceptions of changed roles subscale. Also, the student-centeredness subscale of perceptions of constructivist curriculum change was significantly correlated with the instructional process subscale, $r=.24$, $p<.0025$, and the evaluation subscale of implementation of constructivist teaching and learning activities in class, $r=.24$, $p<.0025$. Thus, it can be concluded that 5.9% of the variance ($.242^2$) of the instructional process subscale of implementation of constructivist teaching and learning activities in class and the evaluation subscale of implementation of constructivist teaching and learning activities in class is accounted for by its linear relationship with the subscale of student-centeredness. Finally, the general views subscale of perceptions of constructivist curriculum change was significantly correlated with the evaluation subscale of implementation of constructivist teaching and learning activities in class, $r=.22$, $p<.0025$. Thus, it can be concluded that 5.0% of the variance ($.224^2$) of the evaluation subscale of implementation of constructivist teaching and learning activities in class is accounted for by its linear relationship with the general views subscale of perceptions of constructivist curriculum change. However, the remaining correlations tended to be lower and not significant ($p>.0025$).

Generally, the results suggest that classroom teachers tend to state that they are open to implementation of constructivist teaching and learning activities in class with regard to planning, the instructional process, methods, materials, and evaluation if they say that they are open to perceive their changed roles. They also tend to state

that they are open to implementation of constructivist teaching and learning activities in class regarding especially evaluation if they say that they have general views about constructivist curriculum change. In addition, classroom teachers tend to say that they are open to implementation of constructivist teaching and learning activities in class with regard to the instructional process and evaluation if they say that they are open to perceive constructivist curriculum change as a student-centered curriculum change.

4.8. Differences on Relationships Among Attitudes Toward Change, Perceptions of Constructivist Curriculum Change and Implementation of Constructivist Teaching and Learning Activities at Primary School Level by Background Variables

As addressed by the seventh research question, in order to determine whether relationships among classroom teachers' attitudes toward change, perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level do differ according to gender, teaching experience, the faculty or school and the department graduated, grade level and the number of students in classroom taught, their involvement in in-service training (including its duration and effectiveness) about recent primary school curriculum, and their self-efficacy of its context and implementation, correlation coefficients were computed. With regard to the number of categories each background variable has, the obtained data were splitted and correlation coefficients were computed and interpreted in each category of each background variable. A calculated difference between categories of each background variable of .3 or greater will be reported in text.

The results of the correlational analyses indicated that the differences found between the correlation coefficients calculated for the differences on relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities at primary school level according to gender, the faculty or school and the department graduated, duration of in-service training about recent primary

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school curriculum, and classroom teachers' self-efficacy of the context and implementation of recent primary school curriculum were equal to or less than .3.

However, the differences found between the correlation coefficients calculated for the differences on relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities at primary school level according to teaching experience, grade level and the number of students in classroom taught, classroom teachers' involvement in and effectiveness of in-service training about recent primary school curriculum were greater than .3 and shown in Table 4.8.

Table 4.8. Differences on Relationships Among Attitudes Toward Change, Perceptions of Constructivist Curriculum Change and Implementation of Constructivist Teaching and Learning Activities in Class at Primary School Level by Background Variables

		Attitudes	Perceptions	Implementation
Teaching experience				
1-5 years	Attitudes		.*	.*
	Perceptions	.*		.*
	Implementation	.*	.*	
6-10 years	Attitudes		-.517	.309
	Perceptions	-.517		.044
	Implementation	.309	.044	
11-15 years	Attitudes		.276	.263
	Perceptions	.276		.277
	Implementation	.263	.277	
16-20 years	Attitudes		.354	.376
	Perceptions	.354		.377
	Implementation	.376	.377	
21+	Attitudes		.373	.219
	Perceptions	.373		.241
	Implementation	.219	.241	
Grade level				
1st grade	Attitudes		.506	.550
	Perceptions	.506		.364
	Implementation	.364	.550	
2nd grade	Attitudes		.433	.708
	Perceptions	.433		.502
	Implementation	.708	.502	
3rd grade	Attitudes		.172	.032

Table 4.8 (cont'd)

		Attitudes	Perceptions	Implementation
Grade level				
3rd grade	Perceptions	.172		.204
	Implementation	.032	.204	
4th grade	Attitudes		-.073	.226
	Perceptions	-.073		.041
	Implementation	.226	.041	
5th grade	Attitudes		.371	.101
	Perceptions	.371		.305
	Implementation	.101	.305	
The number of students taught				
10-25	Attitudes		.217	.221
	Perceptions	.217		.393
	Implementation	.221	.393	
26-32	Attitudes		.175	.244
	Perceptions	.175		.344
	Implementation	.244	.344	
33 and more	Attitudes		.496	.433
	Perceptions	.496		.110
	Implementation	.433	.110	
Involvement in in-service training				
Yes	Attitudes		.226	.220
	Perceptions	.226		.260
	Implementation	.220	.260	
No	Attitudes		.557	.366
	Perceptions	.557		.465
	Implementation	.366	.465	
The effectiveness of in-service training				
Ineffective	Attitudes		.154	.279
	Perceptions	.154		.312
	Implementation	.279	.312	
Few effective	Attitudes		-.032	.083
	Perceptions	-.032		.031
	Implementation	.083	.031	
Partial effective	Attitudes		.460	.185
	Perceptions	.460		.376
	Implementation	.185	.376	
Effective	Attitudes		-.040	.250
	Perceptions	-.040		.207
	Implementation	.250	.207	
Very effective	Attitudes		1.000	1.000
	Perceptions	1.000		1.000
	Implementation	1.000	1.000	

*Can not be computed since at least one of the variables is constant.

To conclude the section on bivariate correlations, the attitudes of classroom teachers toward change were significantly but not strongly correlated with the perceptions of constructivist curriculum change. Since the scale of perceptions of constructivist curriculum change consisted of four subscales, student-centeredness, usability, general views and perceptions of changed roles, correlations with the attitudes toward change were also computed for each subscale. The student-centeredness subscale, the perceptions of changed roles subscale, and the usability subscale of perceptions of constructivist curriculum change were significantly but not strongly correlated with the attitudes toward change. However, the correlations of the general views subscale of perceptions of constructivist curriculum change with the attitudes toward change tended to be lower and not significant.

The attitudes of classroom teachers toward change were also significantly but not strongly correlated with implementation of constructivist teaching and learning activities in class. Since the scale of implementation of constructivist curriculum change consisted of five subscales, planning, instructional process, methods, materials, and evaluation, correlations with the attitudes toward change were computed for each subscale. The materials, the instructional process and the methods subscales of implementation of constructivist teaching and learning activities in class were significantly correlated with the attitudes toward change. However, the correlations of the planning and the evaluation subscales of implementation of constructivist teaching and learning activities in class with the attitudes toward change tended to be lower and not significant.

Classroom teachers' perceptions of constructivist curriculum change were significantly but not strongly related to their implementation of constructivist teaching and learning activities in class. Since the scale of perceptions of constructivist curriculum change consisted of four subscales, student-centeredness, usability, general views and perceptions of changed roles, and the scale of implementation of constructivist curriculum change consisted of five subscales, planning, instructional process, methods, materials, and evaluation, correlations among those subscales were also computed. The perceptions of changed roles subscale of perceptions of constructivist curriculum change was significantly

correlated with all subscales of the scale of implementation of constructivist teaching and learning activities in class. Also, the student-centeredness subscale of perceptions of constructivist curriculum change was significantly correlated with the instructional process subscale and with the evaluation subscale of implementation of constructivist teaching and learning activities in class. Finally, the general views subscale of perceptions of constructivist curriculum change was significantly correlated with the evaluation subscale of implementation of constructivist teaching and learning activities in class. However, the remaining correlations tended to be lower and not significant.

Besides, according to the results of the correlational analyses, the differences found between the correlation coefficients calculated for the differences on relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level according to teaching experience, grade level and the number of students in classroom taught, classroom teachers' involvement in and effectiveness of in-service training about recent primary school curriculum were greater than .3. It can be concluded that the differences between the correlation coefficients calculated for the differences on relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level might be accounted for by teachers' teaching experience, grade level and the number of students in classroom taught, classroom teachers' involvement in and effectiveness of in-service training about recent primary school curriculum.

4.9. Analysis of Open-Ended Data

The questionnaire administered to classroom teachers also included two open-ended questions. The first question asked was about classroom teachers' level of knowledge and skills of recently changed primary school curriculum while the second one addressed problems classroom teachers encounter during the

implementation of recently changed primary school curriculum in terms of e.g. coursebooks, materials, school and classroom environment, students, parents etc.

4.9.1. Classroom Teachers' Level of Knowledge and Skills about Recently Changed Primary School Curriculum

As displayed in Table 4.9, more than 40% of classroom teachers stated that they have lack of knowledge and skills in terms of the instructional process, including preparing indoor activities ($n=2$), use of information technologies ($n=2$), utilizing drama as an instructional technique ($n=2$), instructional methods that promote active learning ($n=1$), preparing instructional materials ($n=1$), teaching based on multiple intelligence types ($n=1$), and teaching students who have kinesthetic learning styles ($n=1$), classroom management ($n=1$), and lastly time management ($n=1$).

Also, close to 30% of them stated that they have lack of knowledge and skills in terms of teaching field subjects such as science and technology ($n=6$), mathematics ($n=1$) and social studies ($n=1$). Most of them claimed, "I need in-service training about experiments, use of labs and lab materials." Some stated, "I have difficulty in doing activities offered in recently changed science and technology and social studies curricula." Some also needed support in terms of teaching mathematics.

Besides, 25% of them stated that they have lack of knowledge and skills in terms of measurement and evaluation ($n=7$) and need to receive practice-based in-service education about recent measurement and evaluation methods and techniques.

Table 4.9. Classroom Teachers' Level of Knowledge and Skills about Recently Changed Primary School Curriculum ($N=28$)

	f	%
Instructional process		
Preparing indoor activities	2	7.1
Use of information technologies	2	7.1
Drama	2	7.1
Instructional methods that promote active learning	1	3.6
Preparing instructional materials	1	3.6
Teaching based on multiple intelligence types	1	3.6

Table 4.9 (cont'd)

	f	%
Instructional process		
Teaching students who have kinesthetic learning styles	1	3.6
Classroom management	1	3.6
Time management	1	3.6
Teaching field subjects		
Science and Technology	6	21.4
Social studies	1	3.6
Mathematics	1	3.6
Measurement and evaluation	7	25
Teaching subjects that require skills (visual arts, music, PE)	4	14.3
No lack of knowledge and skills	2	7.1
Teachers' recently changed roles	1	3.6
Preparing official paper	1	3.6

The total number of responses may exceed the total number of respondents due to multiple responses.

Classroom teachers stated that they need in-service training about teaching subjects that require skills (visual arts, music, PE, etc.) (*n*=4). Even one of them stated, "I wish it would be better if I learned to play an instrument." but one complained, "there is not enough time to have opportunity to develop ourselves due to the fact that there is a curriculum required to be completed by the end of the year although socio-cultural and environmental factors are not considered in the curricula." In addition, classroom teachers stated that they have lack of knowledge and skills in terms of teachers' recently changed roles (*n*=1) and preparing official paper (*n*=1).

Apart from those, there were also classroom teachers who stated that they have no lack of knowledge and skills about recently changed primary school curriculum (*n*=2). One even claimed, "I have already examined all books and documents that inform about the foundations of recently changed primary school curriculum published between 1997 and 2004 by the year of 2000." However, some still denied that they have not left the prior curriculum yet due to existing national assessment studies that are claimed to measure students' knowledge. One also suggested, "It would be better if Ministry of National Education (MoNE) prepared CDs about the implementation of recently changed primary school curriculum and if

there were a free telephone line for us to find answers to the questions related to curriculum implementation."

4.9.2. Problems Classroom Teachers Encounter During Implementation of Recently Changed Primary School Curriculum

As displayed in Table 4.10, problems classroom teachers face during implementation of recently changed primary school curriculum were clustered under the following: Problems encountered due to (1) coursebooks, workbooks, and teacher's guides; (2) measurement and evaluation; (3) the activities; (4) environmental factors, including also school and classroom environments; (5) dual instruction; (6) materials; (7) students; (8) teachers; (9) parents; (10) the interaction among students, teachers and parents; (11) field teaching; and lastly (12) problems faced in general.

Generally, coursebooks, workbooks and teacher's guides were not as good and adequate as it was claimed ($n=12$). There were also teachers complaining that coursebooks, workbooks and teacher's guides included little knowledge but too many activities ($n=6$) and were heavy for students to carry ($n=6$). Since coursebooks, workbooks and teacher's guides included few practices, they felt obliged to utilize other source books ($n=5$). Coursebooks, workbooks and teacher's guides were also not available for the environment ($n=3$). Compared to other journals or source books, their content was simple ($n=2$) since they only consisted of visuals ($n=3$). Specifically, classroom teachers also mentioned problems encountered due to coursebooks, workbooks and teacher's guides subject by subject. Problems classroom teachers face due to Turkish language coursebooks, workbooks and teacher's guides were as follows: Classroom teachers complained that texts in Turkish language coursebooks were too long and difficult to understand ($n=8$). Grammar topics in Turkish language workbooks were also simple and superficial ($n=3$). Besides, social studies coursebooks and workbooks included limited knowledge and were difficult to study ($n=2$).

Classroom teachers complained that evaluation forms were too many and took long and also did not provide feedback ($n=5$). They also stated that parents did

performance tasks and project works instead of their children (*n*=5). Classroom teachers also argued that performance tasks, project works, and portfolios were not preferred to be used due to overloaded course schedule (*n*=4) and were not applicable for the students (*n*=4) since all students did not have computer and the Internet access for performance tasks and project works (*n*=4). Few also underlined that students were nationally assessed based on source books but not on the curriculum (*n*=3).

More than 10% of classroom teachers complained that some activities took long (n=*9*) and thus not enough time is devoted for the activities (*n*=4). Besides, 2.5% of them stated that they were difficult to do (*n*=2). An equal number of classroom teachers also underlined that students were taught according to multiple-choice questions instead of the activities suggested in the curriculum due to national assessment studies (*n*=2).

Close to 4% of classroom teachers stated that environmental factors challenged students to find adequate materials (*n*=3) and even impeded curriculum implementation (*n*=2). Schools had also lack of opportunities (*n*=7). Besides, as stated, crowded classrooms were one of the problems faced due to classroom environment (*n*=10). Classrooms were also inadequate in terms of the exhibition and storage purposes (*n*=5).

In addition, one of the respondents also added that there were also problems faced due to dual instruction but not went in detail.

Approximately 20% of classroom teachers stated that there were not adequate materials in all schools and classrooms (*n*=14) and there were few material types (*n*=3). Besides, students had difficulty in providing appropriate materials every time (*n*=2) since their parents reacted to find every material on time (*n*=2). Teachers also had difficulty in utilizing unusual materials (*n*=2).

Classroom teachers stated that there was a drop in students' quality (*n*=2) whereas one of them claimed that students were not used to student-centeredness. 5% of classroom teachers complained that teachers were tackling with lots of documents and formalities (*n*=4). It was also claimed that teachers were enabled to receive somewhat less in-service education (*n*=3).

Classroom teachers stated that parents were uninformed of (*n*=7) and uninterested in education (*n*=4). Also, there was not a well-built communication among students, teachers, and parents (*n*=2).

Classroom teachers specifically mentioned problems encountered in teaching different subjects. For instance, classroom teachers claimed that recent Turkish language curriculum showed a decrease in reading rate of 40-50% (*n*=2).

In general, according to classroom teachers, students had no equal opportunities for research and practice (*n*=14); parents' level of income and education was low to help students at home (*n*=8); there was a deliberate attempt of teacher-centered curriculum implementation (*n*=3); it was difficult to implement recent curriculum in terms of its goals (*n*=3); socioeconomically disadvantaged students had difficulty in recent curriculum (*n*=2); there were no environments that provide equal opportunities in schools or classrooms (*n*=2); students' physical, personal, and social developments were ignored (*n*=2).

Table 4.10. Problems Faced During Implementation of Recently Changed Primary School Curriculum (*N*=80)

	f	*%*
Problems faced due to coursebooks, workbooks, and teacher's guides		
Generally		
They are not as good and adequate as it is claimed	12	15
They include little knowledge but too many activities	6	7.5
They are heavy to carry	6	7.5
Teachers felt obliged to utilize source books	5	6.25
They include few practices	5	6.25
They are not available for the environment	3	3.75
They consist only of visuals.	3	3.75
Compared to other journals and source books, their content is simple	2	2.5
Other (They are not updated regularly, They do not include any CDs, Sources in the market still address the prior curriculum, They are not appropriate for recent curriculum, There should not be any workbooks especially for the 1st graders, Time devoted for the activities in annual plans is not congruent with teacher's guides, Teacher's guides are not usable, Visuals and examples given in coursebooks are from the metropolitan cities, They include superficial knowledge and questions, They do not let students use notebooks)	10	12.5

Table 4.10 (cont'd)

	f	$\%$
Problems faced due to coursebooks, workbooks, and teacher's guides		
Specifically		
Turkish language coursebooks, workbooks, and teacher's guides		
Texts in Turkish language coursebooks are too long and difficult to understand	8	10
Grammar topics in Turkish language workbooks are simple and superficial	3	3.75
Other (Turkish language coursebooks include unfavorable poems, their beforehand distribution does not fit with the aim of guess studies suggested in the curriculum)	2	2.5
Social studies coursebooks, workbooks, and teacher's guides		
Social studies coursebooks and workbooks include limited knowledge and are difficult	2	2.5
Other (Social studies coursebooks are full with lots of visuals, Topics in social studies coursebooks are disorganized)	2	2.5
Mathematics coursebooks, workbooks, and teacher's guides		
Other (Mathematics coursebooks are confusing, Mathematics coursebooks include few practices)	2	2.5
Life studies coursebooks, workbooks, and teacher's guides		
Other (Life studies coursebooks include few practices, Life studies coursebooks are limited in terms of the content)	1	1.25
Problems faced due to measurement and evaluation		
Evaluation forms are too many	5	6.25
Filling of evaluation forms takes long and they do not provide feedback	5	6.25
Parents do performance tasks and project works	5	6.25
Performance tasks, project works, and portfolios are not applicable for the students	4	5
Performance tasks, project works, and portfolios are not preferred to be used due to overloaded course schedule	4	5
All students do not have computer and the Internet access for performance tasks and project works	4	5
Students are nationally assessed based on source books, but not on recent primary school curriculum	3	3.75
Problems faced due to the activities		
Some take long	9	11.25
Not enough time is devoted for the activities	4	5
They are difficult to do	2	2.5
Students are taught according to multiple-choice questions instead of the activities suggested in primary school curriculum due to national assessment studies	2	2.5

Table 4.10 (cont'd)

	f	$\%$
Problems faced due to the activities		
Other (Parents do the take-home activities, Not all students present their works in the classroom due to large class size, The number of the activities offered in the curriculum is excessive, The number of the activities done in the classroom is few, Some are unnecessary, Topics are simply taught, Not enough time is devoted for multiple intelligence practices, Students are loaded with knowledge due to national assessment studies, They sometimes overshadow the aims, Some activities are difficult to be done due to students' different opportunities)	10	12.5
Problems faced due to the environmental factors		
Environmental factors challenge students to find adequate materials	3	3.75
Environmental factors impede curriculum implementation	2	2.5
Other (Environmental factors are not included and considered in the educational system)	1	1.25
Problems faced due to school environment		
Schools do not provide adequate opportunities	7	8.75
Other (School administrators do not help teachers)	1	1.25
Problems faced due to classroom environment		
Classrooms are crowded	10	12.5
Classrooms are inadequate in terms of the exhibition and storage purposes	5	6.25
Other (Classrooms do not provide equal standards to students in all schools)	1	1.25
Problems faced due to dual instruction	1	1.25
Problems faced due to the materials		
There are not adequate materials in all schools and classrooms	14	17.5
There are few material types	3	3.75
Students have difficulty in providing appropriate materials everytime	2	2.5
Parents react to find every material on time	2	2.5
Teachers have difficulty in utilizing unusual materials	2	2.5
Other (Teachers and students are obliged to provide the materials, Materials are somewhat heavy to carry)	2	2.5
Problems faced due to the students		
There is a drop in students' quality	2	2.5
Other (Students are not used to student-centeredness)	1	1.25
Problems faced due to the teachers		
Teachers are tackling with lots of documents and formalities	4	5
Teachers are enabled to receive somewhat less in-service education	3	3.75

Table 4.10 (cont'd)

	f	$\%$
Problems faced due to the teachers		
Other (Teachers are enabled to receive in-service education from inspectors who are unaware of recent curriculum, Teachers do not consider recent curriculum at the same level, Teachers are not well informed about recent curriculum, Teachers are obliged to conduct more research and prepare more for the lesson, There is not an intern teacher who assists the teacher, There is a drop in teachers' quality)	6	7.5
Problems faced due to parents		
Parents are uninformed	7	8.75
Parents are uninterested	4	5
Other (Parents call their children successful based on their test success, Parents react to expensive activities, Parents have difficulty in active school involvement, Parents have difficulty in performance tasks, Parents are not used to student-centeredness)	5	6.25
Problems due to lack of communication		
There is not a well-built communication among students, teachers, and parents	2	2.5
Other (Their readiness level is not considered)	1	1.25
Problems faced due to field teaching		
Teaching Turkish language		
Recent curriculum shows a decrease in students' reading rate of 40-50%	2	2.5
Other (It is difficult to get used to read without spelling, It is unusual to begin with cursive handwriting, Recent curriculum is overloaded beginning from the 1st grade)	3	3.75
Teaching mathematics		
Other (The context of recent curriculum is limited, Recent curriculum is difficult, Recent curriculum is overloaded beginning from the 1st grade)	3	3.75
Teaching social studies		
Other (Recent curriculum is not based too much on knowledge)	1	1.25
Teaching science and technology	1	1.25
Problems faced in general		
Students have no opportunities for research and practice	14	17.5
Parents' level of income and education is low to help students at home	8	10
There is a deliberate attempt of teacher-centered curriculum implementation	3	3.75
It is difficult to implement recent curriculum in terms of its goals	3	3.75
Socioeconomically disadvantaged students have difficulty in recent curriculum	2	2.5

Table 4.10 (cont'd)

	f	$\%$
Problems faced in general		
There is no environment that provides equal opportunities in schools or classrooms	2	2.5
Students' physical, personal, and social developments are ignored	2	2.5
Other (Recent curriculum is developed based on European standards, The existing infrastructure is not considered, Recent curriculum requires parents to have enough level of income, Recent curriculum aims at being successful in national assessment studies, Teachers are tackling with the psychological problems of disadvantaged students of the current system, National assessment studies hinder students' active involvement in school due to "dershane"s, Recent curriculum is overloaded, The same curriculum is implemented at schools in city centres, suburbs and villages, Recent curriculum is not implemented thoroughly and supervised at any school, The plans offered in recent curriculum is not available for the region and environment)	10	12.5

The total number of responses may exceed the total number of respondents due to multiple responses.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

This chapter discusses the conclusions of the study and provides implications for practice and further research.

5.1. Classroom Teachers' Attitudes Toward Change, Perceptions of Constructivist Curriculum Change, and Implementation of Constructivist Teaching and Learning Activities in Class at Primary School Level

The findings of this study indicated that the majority of classroom teachers agreed with the statements measuring attitudes toward change. It can be suggested that classroom teachers were open to change which can be thought as considerable since Thomas (2003) highlighted that a positive attitude toward change is a prerequisite for change which occurs in the following steps: planning for change, implementation of change, and maintenance of change, respectively. Tal and Yinon (2002) also concluded that attitudes are peacemakers between values and behaviors regarding openness to change in school settings. Several researchers stated that teachers' attitudes toward change depend on how change affects them personally. Welch (1989) claimed that the effectiveness of an innovative change must be proven in terms of personal and professional growth of all involved in school settings, not only in terms of students' growth. Teachers' personal cost appraisal of the change was also described as a variable related to teacher receptivity to change (Waugh & Punch, 1987) and approximately 50% of the variance in attitudes was found to be accounted for by several independent variables of which one is non-monetary cost benefits of the change (Moroz & Waugh, 2000). Consistently, classroom teachers in this study stated that they had positive attitudes toward change as a result of the fact that they might be aware of its effectiveness on their personal and professional growth since close to four fifths or more of them agreed that changes tend to stimulate them, they usually benefit from change, and lastly most of their colleagues benefit from change. Besides, it can be supposed that classroom teachers in this study

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were reinforced by means of incentives during the implementation of change and thus, they had positive attitudes toward change. A little more than four fifths of them stated that change often helps them perform better and the majority of them stated that change benefits the school. Being granted as a result of having some personal or organizational success might play a key role in teachers' commitment to change as also asserted by Kurşunoğlu and Tanrıöğen (2006). The results of this study were also consistent with Aydoğan (2007)'s study resulting in that primary school teachers were ready for the change.

Classroom teachers were generally uncertain about the statements measuring perceptions of constructivist curriculum change, that is, classroom teachers were uncertain about constructivist curriculum change although there have been several studies on teachers' views of constructivist curriculum of which teachers mostly had positive views (Çınar, Teyfur, & Teyfur, 2006; Hevedanlı, Yapıcı, Acun, Yüksel, & Alp, 2009; Korkmaz, 2006a). The reasons behind teachers' being uncertain about constructivist curriculum change might be the fact that they were not informed of recent changes held in primary school curriculum since they were provided inefficient or no in-service training about changes held in primary school curriculum regarding the assumptions underlying constructivist learning approach. Classroom teachers in this study were confused about constructivist curriculum change maybe due to lack of quality of in-service training about recently changed primary school curriculum. Consistently, Demir and Şahin (2009), in their study with a sample of 319 classroom teachers, concluded that classroom teachers were not provided efficient in-service training before the implementation of recently changed primary school curriculum, and thus, they seem not to perceive recently changed primary school curriculum thoroughly which also supports the results of the current study. Inefficiency of in-service training about recently changed primary school curriculum was also considered as an obstacle for its effective implementation (Tekbıyık & Akdeniz, 2008; Yapıcı & Leblebiciler, 2007; Yaşar, Gültekin, Türkkan, Yıldız, & Girmen, 2005). Classroom teachers should be enabled to be clear with what has changed in recent primary school curriculum especially by practice-based in-service

training as also suggested by classroom teachers in this study in order to implement it effectively.

Classroom teachers' being uncertain about constructivist curriculum change might be due to a top-down curriculum change policy, that is, they were not given opportunity to express themselves in recent curriculum change and they were obliged to adopt state-recommended changes in recent primary school curriculum. Although school administrators and policy makers expect teachers to blindly accept change, as perceived by them, little regarding or regardless of their expertise or professional ideas, it is clear that simply mandating change is not enough to successfully and effectively implement change or to enhance student achievement or teacher improvement (Hjelle, 2001). In fact, when they are given opportunity to have voice in curricular change, teachers are able to mention major problems encountered even in an organizational context (Hjelle, 2001). Evans (2000) stated that there are three job-related attitudes toward imposed change as follows: anger, resignation, and adoption of the change. Change can be adopted willingfully (as motivated adopters who are looking forward to change) or unwillingfully (as passive or undecided adopters). Classroom teachers in this study seem to consist of passive or undecided adopters who adopt the imposed change unwillingfully that can also be considered as a reason behind their uncertainty of constructivist curriculum change.

Finally, regarding classroom teachers' implementation of constructivist teaching and learning activities in class, results indicated that classroom teachers often implemented constructivist teaching and learning activities in class in general which means that classroom teachers were open to implementation of constructivist teaching and learning activities in class to improve students' active learning. However, classroom teachers in this study less frequently let students guide the lesson such as by determining the content and instructional strategies. They rarely decided learning goals through discussing with the students and utilized students' confusion as a source of learning. Classroom teachers might be considered to behave somewhat traditionally since they seemed to insist on being traditional and nondemocratic teachers although close to 65% of them perceived teachers' changed roles thoroughly. This might be due to common features of the former curriculum,

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i.e. stable knowledge, students as passive learners, and teacher-centered instruction that formed a traditional teacher identity over many generations and a traditional educational system itself as well. Classroom teachers with less experience with the prior curriculum might be less likely to have difficulty in tackling with recently changed primary school curriculum than those with longer experiences (Carson, n.d.).

Lastly, what they less frequently did was using alternative assessment methods e.g. self-, peer-, group evaluation, and portfolios etc. that can be accounted for by that they had difficulty in the measurement and evaluation process in terms of the alternative assessment tools (Özdemir, 2009) and that they perceived themselves incompetent with recent measurement and evaluation methods and techniques (Gömleksiz, 2007; Gözütok, Akgün & Karacaoğlu, 2005; Karadağ, Deniz, Korkmaz, & Deniz, 2008; Korkmaz, 2006a; Yapıcı & Leblebiciler, 2007). Consistently, classroom teachers in this study also stated that they needed to receive practice-based in-service education about recent measurement and evaluation methods and techniques since they had lack of knowledge and skills in terms of measurement and evaluation methods and techniques as perceived by them. Thus, they should be provided practice-based in-service education about recent measurement and evaluation methods and techniques.

5.2. Relationship Between Attitudes Toward Change and Perceptions of Constructivist Curriculum Change

The attitudes of classroom teachers toward change were significantly but slightly correlated with the perceptions of constructivist curriculum change, $r=.30$, $p<.01$. The results suggested that classroom teachers tend to state that they are open to perceive constructivist curriculum change if they say that they are open to change. A slight correlation between attitudes toward change and perceptions of constructivist curriculum change might be due to the fact that classroom teachers in this study seemed to be least willing to consider curriculum change although they had positive attitudes toward change.

A slight correlation between attitudes toward change and perceptions of constructivist curriculum change found in this study can also be accounted for by conflicting perceptions of the roles policy makers, administrators, and at last teachers play in curriculum change (Urick & Frymier, 1963). Teachers' being expected to blindly accept change (Hjelle, 2001) may also inhibit the consideration of change held in curriculum, and thus, may have effect on teachers' perceptions of constructivist curriculum change.

Another reason behind a slight correlation between attitudes toward change and perceptions of constructivist curriculum change found in this study is a lack of in-service training about recently changed primary school curriculum. There have been studies indicating the impact of in-service training programs on teachers' receptivity to curriculum change (Bümen, 2005; Ha, Lee, Chan, & Sum, 2004). Ha, Lee, Chan, & Sum (2004) stated that teachers generally had positive attitudes toward curriculum change and showed further support for the change after attending practical, and effective in-service training program provided with support on collaboration among teachers, educational scholars, and curriculum policy makers. Also, Bümen (2005) found that a great deal of the teachers agreed that the in-service training workshop did well and teachers' perceptions of recently changed primary school curriculum were generally positive although some aspects of the workshop were criticized.

Since the scale of perceptions of constructivist curriculum change consisted of four subscales, student-centeredness, usability, general views and perceptions of changed roles, correlations with the attitudes toward change were also computed for each subscale. Generally, the results suggested that classroom teachers tend to state that they are open to perceive curriculum change as a student-centered curriculum change, they are open to perceive their changed roles and the applicability of recent curriculum change if they say that they are open to change but it seems that it is not the case for the general views about constructivist curriculum change since a little less than half of them were uncertain about the items clustered under the subscale of "general views", including the appropriateness of measurement and evaluation methods and techniques suggested in recently changed curriculum, the consideration

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of teachers' perceptions and needs in recent curriculum change, fully determination of regional and local needs in recent curriculum change, and lastly the appropriateness of curriculum changes properly. Although classroom teachers in this study had mostly positive attitudes toward change, their uncertainty about the general views subscale of perceptions of constructivist curriculum change might be explained by the problems encountered during the implementation of constructivist curriculum change. Consistent with the results of a research project conducted by Carl (2005), teachers perceived that little attention, if any, was paid to their voice in curriculum development and were only involved in the implementation of the new curriculum although they were the agents of the change. Thus, classroom teachers might be uncertain whether their perceptions and needs in recent curriculum change were considered or not. Classroom teachers were also not sure of proper curriculum changes and whether regional and local needs in recent curriculum change were fully determined. This might be due to the fact that curriculum development studies are still being conducted at national level ignoring regional and local needs (simply, one of participant classroom teachers complained that coursebooks mostly include visuals of the metropolitan cities) and the fact that pilot schools selected are not the representatives of the country. If so, the findings of the pilot studies may not be reflected as they are. Although it is stated that recent curriculum gives flexibility to teachers of the "disadvantaged," it seems unclear to what extent teachers should be flexible in recently changed curriculum. Classroom teachers' uncertainty about proper curriculum changes may be accounted for by ongoing curriculum changes held subject by subject. In fact, the curriculum prior to recent curriculum begun to be implemented since the academic year of 2004-2005 had been implemented for over 20 years.

5.3. Relationship Between Attitudes Toward Change and Implementation of Constructivist Teaching and Learning Activities in Class at Primary School Level

The attitudes of classroom teachers toward change were significantly but slightly correlated with implementation of constructivist teaching and learning

activities in class at primary school level, $r=.25$, $p<.01$. The results suggested that classroom teachers tend to state that they are open to implementation of constructivist teaching and learning activities in class at primary school level if they say that they are open to change. As stated by Kennedy and Kennedy (1996), change is a complex process and one part of that complexity is the role of teachers' attitudes in the implementation of change. Consistently, Sparks (1988) also investigated the relationship between teachers' attitudes toward teaching practices presented in in-service training and the subsequent use of those in the classroom with a sample of 19 junior high school teachers attending workshops with pre- and post-training assessments and concluded that teachers' adoption of the change was predictive of its implementation by teachers and improving teachers were more likely to implement change, herein practices, in their classrooms whereas nonimproving teachers tended to insist on their natural style of teaching, attempting few changes, and having low expectations for themselves and for their students. Consistent with the results of a mixed-method study conducted by Lee (2000), teachers' receptivity to curriculum change (including perceived non-monetary cost-benefit of implementation of curriculum guidelines, perceived practicality, perceived school and other support, issues of concern, and the dominance of organizational factors) was the predictor for teachers' implementation of curriculum change.

Since the scale of implementation of constructivist teaching and learning activities in class at primary school level consisted of five subscales, planning, instructional process, methods, materials, and evaluation, correlations with the attitudes toward change were also computed for each subscale. Generally, the results suggested that classroom teachers tend to state that they are open to implementation of constructivist teaching and learning activities in class at primary school level with regard to the instructional process, methods and materials if they say that they are open to change but it seems that it is not the case for the planning and evaluation suggested by constructivist curriculum change. The reason behind a non-existing relationship between teachers' attitudes toward change and planning might be the fact that classroom teachers have already been provided pre-prepared annual plans offered in teacher's guides or on the Internet and that they tend to prefer adopting

those plans to decrease their workload to adapting them to their own classroom settings which might be an obstacle for their implementation of constructivist teaching and learning activities in class at primary school level and might be an explanation of that close to 30% of classroom teachers always implemented what has changed in terms of planning. It was also found that there is no relationship between teachers' attitudes toward change and evaluation. This might be due to their lower level of self-efficacy with recent measurement and evaluation methods and techniques (Gömleksiz, 2007; Gözütok, Akgün & Karacaoğlu, 2005; Karadağ, Deniz, Korkmaz, & Deniz, 2008; Korkmaz, 2006a; Yapıcı & Leblebiciler, 2007).

5.4. Relationship Between Perceptions of Constructivist Curriculum Change and Implementation of Constructivist Teaching and Learning Activities in Class at Primary School Level

The results of the correlational analyses display that classroom teachers' perceptions of constructivist curriculum change is significantly but slightly related to their implementation of constructivist teaching and learning activities in class at primary school level, with a coefficient of $r=.30$, $p<.01$. Generally, the results suggested that classroom teachers tend to state that they are open to implementation of constructivist teaching and learning activities in class at primary school level if they say that they are open to perceive constructivist curriculum change which all means that the more thoroughly they perceive, the more frequently they implement constructivist teaching and learning activities in class at primary school level. Guskey (1985) also highlighted that the likelihood of teachers' implementing a new curriculum or change is dependent largely upon their judgment of the magnitude of the required change.

Since the scale of perceptions of constructivist curriculum change consisted of four subscales, student-centeredness, usability, general views and perceptions of changed roles, and the scale of implementation of constructivist teaching and learning activities in class at primary school level consisted of five subscales, planning, instructional process, methods, materials, and evaluation, correlations among those subscales were also computed.

The results of the several correlational analyses generally suggested that classroom teachers tend to state that they are open to implementation of constructivist teaching and learning activities in class at primary school level with regard to planning, the instructional process, methods, materials, and evaluation if they say that they are open to perceive their changed roles although classroom teachers' changed roles require radical changes in their instructional practices (Guskey, 1985). They also tend to state that they are open to implementation of constructivist teaching and learning activities in class at primary school level regarding especially evaluation if they say that they have general views about constructivist curriculum change. This might be due to the fact that changes especially held in measurement and evaluation are dramatically different from the prior ones and that require teachers to revise the way they presently assess students, that is, to radically alter their evaluation methods and techniques, are less likely to be implemented well as also stated by Doyle and Ponder (1977). In addition, classroom teachers tend to say that they are open to implementation of constructivist teaching and learning activities in class at primary school level with regard to the instructional process and evaluation if they say that they are open to perceive constructivist curriculum change as a student-centered curriculum change also held in the instructional process and evaluation (Gelbal & Kelecioğlu, 2007).

5.5. Differences on Relationships Among Attitudes Toward Change, Perceptions of Constructivist Curriculum Change and Implementation of Constructivist Teaching and Learning Activities in Class at Primary School Level by Background Variables

The differences found between the correlation coefficients calculated for the differences on the relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level according to teaching experience, grade level and the number of students in classroom taught, classroom teachers' involvement in and effectiveness of in-service

training about recent primary school curriculum were greater than .3 and might be accounted for by the aforementioned variables.

Comparing classroom teachers having 16-20 years of experience with those who have 6-10 years of experience, the difference between calculated correlation coefficients of perceptions of constructivist curriculum change and implementation of constructivist teaching and learning activities in class at primary school level was greater than .3 and might be explained by teaching experience since more experienced classroom teachers might resist radically altering their instructional practices in relation to how they do perceive change held in recent primary school curriculum compared to less experienced ones.

Comparing classroom teachers teaching 1st and 2nd graders with those teaching 3rd, 4th, and 5th graders, the differences among calculated correlation coefficients of attitudes toward change, perceptions of constructivist curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level were greater than .3 and might be explained by grade level taught. This might be due to changes held in recent primary school curriculum since they have become more comprehensive in terms of the number of the subjects in which constructivist curriculum change initiated, and also deeper and complexier in terms of the content as a characteristic of a spiral curriculum in relation to the grade level ascending.

Comparing classroom teachers teaching 26-32 students in classroom with those teaching 33 and more students, the difference between calculated correlation coefficients of attitudes toward change and of perceptions of constructivist curriculum change was greater than .3 and might be explained by the number of students taught in classroom since classroom teachers teaching in more crowded classrooms, due to challenging problems as also stated by respondent classroom teachers, might perceive constructivist curriculum change and also change in general negatively compared to those teaching in less crowded classrooms.

Comparing classroom teachers who participated in in-service training about recent primary school curriculum with those who did not participate in any in-service training about recent primary school curriculum, the difference between calculated

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correlation coefficients of attitudes toward change and of perceptions of constructivist curriculum change was greater than .3 and might be explained by the involvement in in-service training about recent primary school curriculum in favor of classroom teachers who did not participate in in-service training about recent primary school curriculum. One reason might be that classroom teachers, via in-service trainings, were aware of the fact that there are some deficiencies, ambiguities, and contradictions in recent primary school curriculum that might lower the relationship between their attitudes toward change and perceptions of constructivist curriculum change. Another reason might be that in-service education about recent primary school curriculum received might not be highly-qualified or effective as also agreed by respondent classroom teachers.

Comparing classroom teachers who stated that in-service training about recent primary school curriculum received was very effective with those who stated that in-service training about recent primary school curriculum received was effective, partially effective, few effective and ineffective, the differences among calculated correlation coefficients of attitudes toward change, perceptions of constructivist curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level were greater than .3 and might be explained by the effectiveness of in-service training about recent primary school curriculum in favor of classroom teachers who stated that in-service training about recent primary school curriculum received was very effective. However, this might be due to few number of classroom teachers (n=3) who stated that in-service training about recent primary school curriculum received was very effective. In fact, most of the classroom teachers in this study stated that in-service education about recent primary school curriculum received was partially effective, but not very effective.

In relation to the question on level of knowledge and skills about recently changed primary school curriculum, classroom teachers stated that they had lack of knowledge and skills in terms of the instructional process in general, including preparing indoor activities, use of information technologies, utilizing drama as an instructional technique, instructional methods that promote active learning, preparing instructional materials, teaching based on multiple intelligence types, and teaching

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students who have kinesthetic learning styles, classroom management and lastly time management. From all of those, it is seen that classroom teachers might need to receive a comprehensive practice-based in-service training considering needs, professional career, motivation, and learning in a constructivist context since it would be more effective (Eren, Özen, & Karabacak, 2010). Also, they had lack of knowledge and skills in terms of teaching field subjects such as science and technology, mathematics and social studies, and subjects that require skills (visual arts, music, PE, etc.) since, as stated, there is not enough time to have opportunity to develop themselves due to the fact that there is a curriculum required to be completed by the end of the year although socio-cultural and environmental factors are not considered in the curricula. Classroom teachers also stated that they needed to receive practice-based in-service education about recent measurement and evaluation methods and techniques. Lastly, classroom teachers had also lack of knowledge and skills in terms of teachers' recently changed roles and preparing official paper.

In relation to the question on the problems classroom teachers encounter during implementation of recently changed primary school curriculum, the results revealed that there are certain factors influencing the implementation of recently changed primary school curriculum. Those factors can be divided into twelve categories as follows: Coursebooks, workbooks, and teacher's guides; measurement and evaluation; the activities; environmental factors, including also school and classroom environments; dual instruction; materials; students; teachers; parents or caregivers; the interaction among students, teachers and parents/caregivers; field teaching; and lastly problems faced in general.

Generally, coursebooks, workbooks and teacher's guides were not as good and adequate as it was claimed since they included little knowledge but too many activities and were heavy for students to carry. Since coursebooks, workbooks and teacher's guides included few practices; classroom teachers stated that they should feel obliged to utilize other source books. Coursebooks, workbooks and teacher's guides were also not available for the environment Compared to other journals or source books; their content was simple since they only consisted of visuals.

Specifically, classroom teachers also mentioned problems encountered due to coursebooks, workbooks and teacher's guides subject by subject. Although Semerci (2004) claimed that Turkish language coursebooks were perceived as generally acceptable, classroom teachers complained that texts in *Turkish language* coursebooks were too long and difficult to understand. This might be due to lack of standards related to how texts in Turkish language coursebooks should be long in recent Turkish language primary school curriculum although there were pre-determined criteria in the 1981 Turkish language primary school curriculum, e.g. 150-200 words for 4th graders while 200-300 words for 5th graders (Coşkun & Taş, 2008). Grammar topics in Turkish language workbooks were also simple and superficial. *Social studies* coursebooks and workbooks included limited knowledge and were difficult to study. Consistently, Taş (2007) found that classroom teachers' views of the content of social studies coursebooks were not fully positive while Öcal and Yiğittir (2007) stated that classroom teachers were mostly pleased with social studies coursebooks. Both *mathematics* and *life studies* coursebooks included few practices. Consistently, Semerci and Semerci (2004) also recommended that mathematic coursebooks should include more practices and questions. Mathematics coursebooks were confusing while life studies coursebooks were limited in terms of the content. The results of the study conducted by Güven (2010) also revealed that life studies coursebooks were inadequate in terms of providing enough examples to facilitate learning and enabling students to be active in their process of learning.

When problems faced due to measurement and evaluation considered, classroom teachers complained that evaluation forms were too many and took long and as well did not provide feedback. 6.25% of them also stated that parents did performance tasks and project works instead of their children. Classroom teachers also argued that performance tasks, project works, and portfolios were not preferred to be used due to overloaded course schedule and were not applicable for the students since all did not have computer and the Internet access for performance tasks and project works as stated by 5% of respondent classroom teachers. Few also underlined that students were nationally assessed based on source books but not on the curriculum. Regarding measurement and evaluation, the results of this study were

mostly consistent with the results of several studies (Anıl & Acar, 2008; Arslan, Kaymakçı, & Arslan, 2009; Çelikkaya, Karakuş, & Demirbaş, 2010; Çimer & Çakır, 2007; Gelbal & Kelecioğlu, 2007).

As stated by Adıgüzel (2009), classroom teachers rarely face problems during implementation of recently changed primary school curriculum especially in terms of the acquisitions, content, and evaluation, but they more encounter problems related to the teaching-learning process. When problems faced due to the activities considered, less than 15% of classroom teachers complained that some activities took long and thus not enough time was devoted for the activities. Besides, they were also difficult to do. A very few of them also underlined that students were taught according to multiple-choice questions instead of the activities suggested in the curriculum due to national assessment studies.

When problems encountered due to environmental factors including school and classroom environments considered, classroom teachers stated that environmental factors challenged students to find adequate materials and even impeded curriculum implementation when they were not included and considered in the educational system which was the case as stated by very few of classroom teachers. When problems due to school environment considered, schools had lack of opportunities. According to respondent classroom teachers, classrooms were also inadequate in terms of the exhibition and storage purposes. Besides, crowded classrooms were one of the most challenging problems faced due to classroom environment. Gürol and Yalçın (2009) also conducted a study on the problems bringing about crowded classrooms during curriculum implementation as follows: Classroom teachers stated that they had difficulty in classroom and time management, providing a well-organized seating arrangement, utilizing materials at a satisfactory level, teaching students in accordance with their needs and interests, communicating with them, involving all of them in indoor activities, and providing them adequate feedback.

In addition to problems faced due to dual instruction, there were also problems encountered due to materials. Classroom teachers stated that there were not adequate materials in all schools and classrooms and several types of materials.

Besides, they stated that students had difficulty in providing appropriate materials every time since their parents/caregivers reacted to find every material whenever needed. Teachers also had difficulty in utilizing unusual materials. Results related to implementational problems due to lack of materials were consistent with the results of several studies (Gömleksiz, 2005; Gömleksiz, 2007; Özpolat, Sezer, İşgör, & Sezer, 2007; Yapıcı & Leblebiciler, 2007).

When problems faced due to the students considered, classroom teachers stated that there was a drop in students' quality and also claimed that students were not used to student-centeredness and thus, recently changed primary school curriculum since they still expected all from their teachers (Altun & Şahin, 2009).

When problems faced due to the teachers taken into consideration, classroom teachers complained that teachers were tackling with lots of documents and formalities. They also claimed that teachers were enabled to receive somewhat less in-service education while very few of them stated that teachers were enabled to receive in-service education from inspectors who were unaware of recent curriculum. As also stated by Adıgüzel (2009), classroom teachers who were not informed of recently changed primary school curriculum encountered more problems than did those who were aware of it. In fact, Gültekin and Çubukçu (2008) found that teachers perceive in-service training as a contributional activity to their individual and organizational growth and state the reasons of why in-service training is required as a need of interpersonal communication, changes at schools, and changes at society besides required knowledge and skills for the higher positions. Seferoğlu (2001) also stated that teachers' sharing their experiences with their colleagues after attending a in-service training program give teachers opportunities to develop their instructional knowledge and skills.

When problems faced due to parents considered, classroom teachers stated that parents were uninformed of and uninterested in education. A very few of them complained that parents called their children successful based on their test success, they showed reactions to expensive activities, they had difficulty in active school involvement and getting used to student-centeredness since parents were still tackling with performance tasks of their children and had difficulty in those tasks that

might unfortunately show that teachers were aware of that parents did performance tasks at home for the students.

When problems due to the interaction among students, teachers and parents/caregivers considered, there was not a well-built communication among students, teachers, and parents/caregivers. Although Balkar (2009) stated that teachers were more unsatisfied with school-parent collaboration compared to parents/caregivers and effective collaboration between parents and schools is possible to be built with only the efforts of counter sides as thought by both of them. However, Çelenk (2003) highlighted that children of parents who have supportive attitudes toward education and interact with school by having consensus on the curriculum implemented had higher school success.

When problems faced due to field teaching, classroom teachers specifically mentioned problems encountered in teaching different subjects. For instance, when problems encountered during teaching Turkish language considered, classroom teachers claimed that recent curriculum showed a decrease in reading rate of 40-50% while a very few of them stated that it was difficult to get used to read without spelling; it was unusual to begin with cursive handwriting; and recent curriculum was overloaded beginning from the 1st grade. Consistently, Şahin, Inci, Turan and Apak (2006) found, according to the results of a reading test, that the students who learned reading via the whole language method can read faster compared to those who learned to read by the phonics method since the phonics method cause slower reading due to suffix mistakes frequently made, yet better understanding. However, Bay (2010) concluded that the phonics method suggested in recent Turkish language curriculum enable students to read, write and comprehend texts higher than their level of development. When cursive handwriting considered, Uğurlu (2009) also underlined that classroom teachers oppose to cursive handwriting at first but their opinions change within time due to the fact that it works well. When problems faced with teaching mathematics considered, a very few of them stated that the context of recent curriculum was limited and difficult to implement (Halat, 2007), and overloaded beginning from the 1st grade. As stated by a very few of the respondents,

the problem faced during teaching social studies was that recent curriculum was not based too much on knowledge.

In general, there were also problems faced during the implementation of recently changed curriculum as stated by respondent classroom teachers: Students had no equal opportunities for research and practice and parents/caregivers' level of income and education was low to help students at home. Socioeconomically disadvantaged students had difficulty in recent curriculum. There was a deliberate attempt of teacher-centered curriculum implementation. Also, it was difficult to implement recent curriculum in terms of its goals. There were also no environments that provide equal opportunities in schools or classrooms. Finally, students' physical, personal, and social developments were ignored.

Also regarding most of those issues mentioned above, there have been several studies on the whys of the problems faced during implementation of recently changed primary school curriculum as follows: Lack of school infrastructure, physical appearance of the classrooms, materials, and educational technology; crowded classrooms; teachers' lack of knowledge and skills about the philosophy or approach of recently changed primary school curriculum; limited time due to the activities suggested; teacher's guides; formalities due to lots of documents and forms to be filled by teachers, lack of professional support provided (Akpınar, Turan, & Gözler, 2006; Altun & Şahin, 2009; Korkmaz, 2006b; Öztürk & Tuncel, 2006; Yıldırım, 2006).

5.6. Implications for Practice

Studying the possible relationships among classroom teachers' attitudes toward change, their perceptions of constructivist curriculum change, and their implementation of constructivist teaching and learning activities in class at primary school level enables people in charge in general with educational change and specifically with curriculum change, educational policy makers, curricularists, teachers, students and even parents, to gain insights into perceptions of classroom teachers about change, curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level.

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According to the major finding of this study, classroom teachers were open to change and implementation of constructivist teaching and learning activities in class at primary school level although they were uncertain about constructivist curriculum change. Accordingly, it can be concluded that classroom teachers may have lack of or no knowledge and skills of recent curriculum change or they may be obliged to adopt state-recommended changes in recent primary school curriculum as passive or undecided adopters of the imposed change. Thus, they should be provided comprehensive in-service teacher training programs in order to be informed of constructivist curriculum change and be given opportunity to express themselves in recent curriculum change regarding their expertise or professional ideas as implementers of the intended curriculum change, but not as people who are expected to blindly accept change. As also stated by participant classroom teachers, in-service teacher training programs about curriculum change should be practice-based (not only including presentation slides) and provided with support on a collaboration among teachers, educational scholars teaching at universities, and curriculum policy makers since the future of any educational change, specifically, curriculum change is dependent upon common understanding and collaborative work (Fullan & Stiegelbauer, 1991). In-service teacher training programs should be more frequently provided considering teachers' needs, career plans, motivation, and learning (Eren, Özen, & Karabacak, 2010) in order not to cause classroom teachers to say, "Just when I learned all the answers, they changed all the questions." For this reason, attention should be paid on that in-service classroom teachers should often, even always, be educated about recent changes and trends in education, and specifically, in primary school curriculum.

Welch (1989) claimed that the effectiveness of an innovative change must be proven in terms of personal and professional growth of all involved in school settings, not only in terms of students' growth. Consistently, classroom teachers might adopt and support changes held in primary school curriculum if its success in terms of their personal and professional growth and on students' achievement were obtained. When the success of changed primary school curriculum obtained, classroom teachers and also students should be provided adequate feedback,

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reinforced and granted by incentives. However, it seems difficult to see the impact of recently changed primary school curriculum on students' and as well teachers' achievement according to the results of current national assessment studies measuring knowledge involved in sourcebooks, yet not in recent curriculum as claimed by participant classroom teachers. Current national assessment studies should be revised and conducted in a way that they will measure higher-order thinking skills besides rote learning. Also, when recent measurement and evaluation methods and techniques suggested in recently changed primary school curriculum considered, changes especially held in measurement and evaluation are dramatically different from the prior ones and that require teachers to revise the way they presently assess students, that is, to radically alter their evaluation methods and techniques, are less likely to be implemented well. So, classroom teachers should receive practice-based in-service training programs about them since they have lack of knowledge and skills or they perceive themselves as incompetent with those to increase their self-efficacy.

When implementation of constructivist teaching and learning activities in class at primary school level considered, although classroom teachers are ready to do all they can to improve students' active learning, they rarely let students guide the lesson such as by determining the content and instructional strategies, decided learning goals through discussing with the students, and utilized students' confusion as a source of learning. Classroom teachers might be considered to behave somewhat traditionally since they seemed to insist on being traditional and nondemocratic teachers due to common features of former curriculum, i.e. stable knowledge, students as passive learners, and teacher-centered instruction that formed a traditional teacher identity over many generations and a traditional educational system itself as well. Classroom teachers should be more encouraged to experience and experiment recently changed primary school curriculum.

Since classroom teachers in this study are uncertain about the general views related to the perceptions of constructivist curriculum change, it can be suggested that attention should be paid to their voice in curriculum development and not only be involved in the implementation of the new curriculum but also the planning and

evaluation of curriculum change. Curriculum development studies should not only be conducted at national level but also at regional and local level in order to ensure that regional and local needs are considered and pilot schools selected should be the representatives of the country and studies conducted in pilot schools should draw the accurate picture of recent curriculum change all around Turkey. It should also be declared to what extent classroom teachers could be flexible in recently changed primary school curriculum when teaching the "disadvantaged."

When classroom teachers' lack of knowledge and skills about recently changed primary school curriculum considered, it can be recommended that classroom teachers should receive a comprehensive practice-based in-service training considering needs, professional career, motivation, and learning in a constructivist context since it would be more effective (Eren, Özen, & Karabacak, 2010). Also, there should be enough time for them to have opportunity to develop themselves in the subjects that require skills, i.e. music, visual arts, PE. There should not be a curriculum required to be completed by the end of the year due to different socio-cultural and environmental factors that should be considered. Classroom teachers should also receive practice-based in-service education about recent measurement and evaluation methods and techniques, their recently changed roles and administrative works.

Last but not least, when problems classroom teachers encounter during implementation of recently changed primary school curriculum considered, the following can be recommended:

Generally, classroom teachers should be informed that they are not obliged to use all activities offered in coursebooks, workbooks and teacher's guides. They should also be thinner and weaker for students to easily carry them. It was also suggested by respondent classroom teachers that there should be booklets prepared unit by unit or lesson by lesson. Coursebooks, workbooks and teacher's guides should provide numerous practices and be available for the environment. Compared to other journals or source books; their content should not be simple, yet also not be enriched only with visuals. Specifically, texts in *Turkish language* coursebooks should not be too long and difficult to understand. Grammar topics in Turkish

language workbooks should not be simple and superficial. *Social studies* coursebooks and workbooks should not include limited knowledge and not be difficult to study. It can also be recommended that mathematic coursebooks should include more practices and questions while life studies coursebooks should provide enough examples to facilitate learning and enabling students to be active in their process of learning.

When problems faced due to measurement and evaluation considered, the number of evaluation forms should be decreased to be able to provide adequate feedback. Classroom teachers also stated that parents did performance tasks and project works instead of their children. Parents should also be informed of recent measurement and evaluation methods and techniques by classroom teachers. Students should be encouraged to complete performance tasks and do project works in classroom. Classroom teachers also argued that performance tasks, project works, and portfolios were not preferred to be used due to overloaded course schedule and were not applicable for the students since all did not have computer and the Internet access for performance tasks and project works. Available course schedules should be provided and students should be encouraged to conduct research and access knowledge presented in books, journals, and encyclopedia. Few also underlined that students were nationally assessed based on source books but not on the curriculum. Thus, current national assessment studies should be revised and conducted in a way that they will measure the teaching-learning process provided by recent primary school curriculum and as well the content.

When problems faced due to the activities considered, activities offered should be prepared in a way that they can be done in a class hour. Besides, they should also be appropriate for the students' level of development. As claimed by classroom teachers, students should be taught according to what provided in the curriculum, but not according to multiple-choice questions due to national assessment studies.

When problems encountered due to environmental factors including school and classroom environments considered, environmental factors should be considered in the educational system in order not to let them challenge students to find adequate

materials and even impede curriculum implementation. When problems due to school environment considered, schools should provide opportunities. Besides, the number of crowded classrooms should be lowered in order to make classroom teachers be good at classroom and time management, provide a well-organized seating arrangement, utilize materials at a satisfactory level, teach students in accordance with their needs and interests, communicate with them, involve all of them in indoor activities, and provide them adequate feedback and so that they could perceive constructivist curriculum change and also change in general positively as also highlighted in the findings section. Classrooms should also be adequate in terms of the exhibition and storage purposes.

In addition to problems faced due to dual instruction, there were also problems encountered due to materials. There should be adequate and various types of materials in all schools and classrooms since students had difficulty in providing appropriate materials every time since their parents/caregivers reacted to find every material whenever needed. Teachers should also be educated in terms of utilizing unusual materials or manual guides or CDs should be provided for their use.

When problems faced due to the students considered, students should also be informed of their changed roles in order to enable them to get used to student-centeredness and also recently changed primary school curriculum since they still expected all from their teachers.

When problems faced due to the teachers taken into consideration, the number of documents and formalities teachers tackling with should be decreased or there should be an intern teacher who assists the teacher.

When problems faced due to parents/caregivers considered, parents/caregivers should be informed of student-centered learning so that they had better not call their children successful based on their test success and they had better not do performance tasks of their children.

When problems due to the interaction among students, teachers and parents/caregivers considered, a well-built communication should be provided among students, teachers, and parents/caregivers and their readiness level for change should be considered.

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When problems faced due to field teaching, recent Turkish language curriculum should be revised again since it was claimed that it showed a decrease in reading rate of 40-50%. The context of recent primary mathematics curriculum should be comprehensive, but appropriate for the students' level of development. Recent social studies curriculum should include activities and practices well-balanced with knowledge presented.

Finally, school infrastructure, i.e. physical appearance of the classrooms, materials, and educational technology should be considered beforehand the implementation of the curriculum. The number of crowded classrooms should be tried to be lowered because constructivist curriculum change requires that individual needs of learners should be met during the implementation of the curriculum. Teachers' lack of knowledge and skills about the philosophy or approach of recently changed primary school curriculum should be met via comprehensive in-service teacher training programs. Enough time should be devoted for the activities suggested. Formalities due to lots of documents and forms to be filled by teachers should be reduced, and last but not least professional support should be ongoingly provided.

5.7. Implications for Further Research

Considering the results of this study, that classroom teachers are open to change and implementation of constructivist teaching and learning activities in class at primary school level although they are uncertain about curriculum change, a comprehensive practice-based in-service teacher training curriculum recommended above should be designed and developed with regard to classroom teachers' needs, career plans, learning and motivation. As it is known, beforehand curriculum design and development, classroom teachers' needs in terms of recent educational changes and trends should be determined and prioritized via needs assessment studies. Classroom teachers' learning styles and types or levels of motivation should be measured quantitatively while in-depth knowledge about their career plans should be gained qualitatively. Research of pre- and post-test control group design should be conducted. Before developing a comprehensive practice-based in-service teacher

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training curriculum, a pre-test should administered to participant classroom teachers. Then, a developed comprehensive practice-based in-service teacher training curriculum should be implemented for certain time. By means of a post-test administered, the effectiveness of that curriculum can be determined. It is suggested that improving teachers will benefit strongly from a program that fosters self-knowledge and understanding in order to assist teachers to act as the agents of the change (Lukacs, Holincheck, Galluzzo, & Fuhrman, 2007). Also, what makes classroom teachers positive about change can be a topic to study further.

In addition, classroom teachers' levels of curriculum literacy, the quality or state of being literate of curriculum according to Webster's dictionary (1993) which might account for their uncertainty about curriculum change should be measured via a scale development study.

Besides, the data on the implementation of constructivist curriculum change in this study were collected through a questionnaire. Instead, classroom teachers should be interviewed or observed in their natural settings, in the learning environment and the data should be triangulated by this way.

This study should also be replicated with a larger sample size, e.g. with all classroom teachers in cities where recently changed primary school curriculum was piloted.

Since teachers tend to perceive that they are competent with curriculum change, their actual self-efficacy can be measured both quantitatively and qualitatively.

The findings of this study can be triangulated by means of investigating school administrators' and inspectors views of change, curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level since school administrators are in charge with creating school culture in which proposed curriculum change is being implemented by guiding teachers about recently changed policies, rules and regulations provisioned by the MoNE and inspectors who are responsible with classroom observations to evaluate how recently changed primary school curriculum is being implemented.

This study has been carried out to investigate the possible relationships among attitudes toward change, perceptions of constructivist curriculum change, and implementation of constructivist teaching and learning activities in class at primary school level in public primary schools. Thus, a comparative study with private primary schools seems to be needed to describe the possible solutions to the problems faced in public primary schools are overcome in private ones.

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APPENDIX A

DEĞİŞİM, OLUŞTURMACI EĞİTİM PROGRAMI VE UYGULAMAYA İLİŞKİN ÖĞRETMEN ALGILARI ANKETİ

Değerli Öğretmenim,

Bu ölçek, sınıf öğretmenlerinin değişime yönelik tutumları ile eğitim programı değişikliklerine yönelik algıları ve bu değişiklikleri uygulama biçimleri arasındaki ilişkiyi belirlemek amacıyla hazırlanmıştır. Eğitim programlarında yapılan değişikliklerin başarılı olabilmesi, eğitim programlarının uygulayıcıları olan öğretmenlerin bu değişikliklere yönelik algılarına ve bu değişiklikleri uygulayıp uygulayamadıklarına bağlıdır. Bu bağlamda, eğitim programları değişikliklerine yönelik öğretmen algılarının belirlenmesi önem arz etmektedir. **Araştırmanın amacına ulaşması, ölçek maddelerini dikkatle okumanıza, içtenlikle ve eksiksiz yanıtlamanıza bağlıdır.** Ölçek, dört bölümden oluşmaktadır. İlk bölümde demografik bilgileriniz, ikinci bölümde değişime yönelik tutumlarınız, üçüncü bölümde eğitim programı değişikliklerine yönelik algılarınız ve son bölümde ise eğitim programı değişikliklerini uygulama biçimleriniz ölçülmektedir. Ölçek maddelerini dikkatlice okuduktan sonra seçeneklerden size en uygun olanını soruların karşısındaki boşluklara (X) işareti koyarak yanıtlayınız. **Toplanan veriler bilimsel araştırma dışında hiçbir amaçla kullanılmayacaktır. Araştırmaya katılımınız ve katkılarınız için çok teşekkür ederim.**

Koray KASAPOĞLU
Orta Doğu Teknik Üniversitesi
Sosyal Bilimler Enstitüsü
Eğitim Programları ve Öğretim Ana Bilim Dalı
Tezli Yüksek Lisans Öğrencisi

A) DEMOGRAFİK BİLGİLER

1) Cinsiyetiniz:
   Kadın ( ) Erkek ( )
2) Yaşınız: …………
3) Mezun olduğunuz fakülte veya yüksek okul: ………………….............................. (Belirtiniz.)
4) Mezun olduğunuz bölüm:
   Sınıf Öğretmenliği ( )
   Sınıf Öğretmenliği dışında bir bölümden mezunsanız belirtiniz: …………………....
5) Mesleki deneyiminiz: ………………. (Yıl olarak belirtiniz)
6) Şu an kaçıncı sınıfı okutmaktasınız?: …………………. (Belirtiniz.)
7) Şu an okutmakta olduğunuz sınıfın mevcudu kaçtır?: ……………… (Belirtiniz.)
8) 2004 yılından itibaren yeniden geliştirilen öğretim programlarıyla ilgili bir hizmet içi eğitim etkinliğine katıldınız mı?
   Evet ( ) Hayır ( )
   (Yanıtınız "Evet" ise, 9 ve 10. Soruları yanıtlayınız.)
9) Süresi?:………………………………………….. saat/gün
10) Katıldığınız hizmet içi eğitimin yeni programı tanıtmada ne ölçüde yeterli olduğunu aşağıdaki skala çerçevesinde belirtiniz.
    Çok yeterli ( ) Yeterli ( ) Kısmen yeterli ( ) Az yeterli ( ) Yeterli değil ( )
11) Yeni öğretim programlarına kapsam ve uygulanış biçimiyle ne düzeyde hâkim olduğunuzu düşünüyorsunuz?
    Çok yüksek düzeyde ( ) Yüksek düzeyde ( ) Orta düzeyde ( )
    Düşük düzeyde ( ) Çok düşük düzeyde ( )

B) DEĞİŞİME YÖNELİK TUTUMLAR

Aşağıda değişime yönelik tutumlarınızı ölçen ifadeler yer almaktadır. Lütfen size en uygun olan seçeneği, ilgili kutucuğa çarpı işareti (X) koyarak işaretleyiniz.

	Tamamen katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Tamamen katılmıyorum
1. Okulun sürekli bir değişim içinde olmasını isterim.					
2. Değişim, okula yarar sağlar.					
3. Yeni fikirlere karşı koyarım.					
4. Değişimden hoşlanmam.					
5. Meslektaşlarımın çoğu değişimden fayda görür.					
6. Yeni fikirleri denemeye yatkınım.					
7. Değişim, beni hayal kırıklığına uğratır.					
8. Değişim, daha iyi çalışmama yardımcı olur.					
9. Yeni fikirleri her zaman desteklerim.					
10. Değişim, bana heyecan verir.					
11. Diğer insanlar değişimi desteklediğimi düşünür.					
12. Olaylara ve durumlara ilişkin yeni yaklaşımlar öneririm.					
13. Değişimlerin çoğu rahatsız edicidir.					
14. Değişim, genellikle okuldaki yetersiz koşulların iyileşmesine yardımcı olur.					
15. Değişimi desteklemek için ne gerekiyorsa yapmaya hazırım.					
16. Çoğu değişimi memnun edici buluyorum.					
17. Değişimden genellikle yararlanırım.					
18. Yeni fikirleri denemekten genellikle çekinirim.					

C) EĞİTİM PROGRAMI DEĞİŞİKLİKLERİNE YÖNELİK ALGILAR

Aşağıda eğitim programı değişikliklerine yönelik algılarınızı ölçen ifadeler yer almaktadır. Lütfen size en uygun olan seçeneği, ilgili kutucuğa çarpı işareti (X) koyarak işaretleyiniz.

	Tamamen katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Tamamen katılmıyorum
19. Eğitim programlarında yapılan son değişiklikleri olumlu buluyorum.					
20. Eğitim programlarında yapılan son değişikliklerin öğrenci ihtiyaçlarını karşıladığını düşünüyorum.					
21. Eğitim programlarında yapılan son değişikliklerin uygulanmasında önemli bir role sahip olduğumu düşünüyorum.					
22. Eğitim programlarında yapılan son değişikliklerin ülke genelinde uygulanabilir olduğunu düşünüyorum.					
23. Eğitim programlarında yapılan son değişiklikleri sınıf içi uygulamalara tam anlamıyla yansıttığımı düşünüyorum.					
24. Eğitim programlarında yapılan değişiklikleri anlamamı hizmet içi eğitimin kolaylaştırdığını düşünüyorum.					
25. Eğitim programlarında yapılan son değişiklikleri uygulama konusunda desteğe ihtiyacım var.					
26. Eğitim programlarında yapılan değişikliklerin öğretmen görüşlerini ve ihtiyaçlarını yansıttığını düşünüyorum.					
27. Eğitim programı değişikliklerini etkin bir biçimde uygulayabiliyorum.					

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	Tamamen katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Tamamen katılmıyorum
28. Eğitim programlarında yapılan değişikliklerde öğrencilerin bireysel farklılıklarının dikkate alındığını düşünüyorum.					
29. Eğitim programlarında yapılan son değişikliklerde bölgesel ve yerel ihtiyaçların tam anlamıyla belirlendiğini düşünüyorum.					
30. Eğitim programlarının sürekli değiştirilmesini uygun buluyorum.					
31. Değiştirilen son eğitim programlarında bana atfedilen yeni rollerin farkındayım.					
32. Değiştirilen son eğitim programlarında yer alan yaklaşımları (çoklu zekâ kuramı, probleme dayalı öğrenme, proje tabanlı öğrenme vs.) uygulanabilir buluyorum.					
33. Eğitim programlarında önerilen etkinlikleri düzenlemeye zaman **ayıramıyorum.**					
34. Yeni eğitim programlarındaki öğrenme yaşantılarının öğrencilerin günlük hayatta karşılaştıkları sorunları çözmelerine yardımcı olduğunu düşünüyorum.					
35. Yeni eğitim programlarında öğrencilerin derinlemesine araştırma ve soruşturma yaparak bilgiyi özümsediklerini düşünüyorum.					
36. Değiştirilen son eğitim programlarında önerilen ölçme-değerlendirme tekniklerini (öz, akran, grup, performans ve portfolyo değerlendirme, proje ödevleri vs.) uygun buluyorum.					
37. Değiştirilen son eğitim programlarının öğrenci merkezli olduğunu düşünüyorum.					
38. Değiştirilen son eğitim programlarının uygulamaya dönük olduğunu düşünüyorum.					

D) ÖĞRENME-ÖĞRETME SÜRECİ

Aşağıda öğrenme-öğretme sürecinde gerçekleştirdiğiniz etkinlikleri ölçen ifadeler yer almaktadır. Lütfen size en uygun olan seçeneği, ilgili kutucuğa çarpı işareti (X) koyarak işaretleyiniz.

	Her zaman	Sık sık	Ara sıra	Nadiren	Hiç
39. Derse aktif katılım için öğrencilerimi teşvik ederim.					
40. Öğrencilerimin bakış açısını öğrettiğim konuyla ilişkilendiririm.					
41. Öğrencilerin konuyla ilgili görüşlerini karşılaştırmalarına fırsat veririm.					
42. Öğrencilerimi, grup etkinlikleri yoluyla iş birliği içinde çalışmaya teşvik ederim.					
43. Sınıf içinde üst düzey düşünme becerilerine ait terimleri (sınıflama, çözümleme, tahminde bulunma, yorumlama gibi) kullanırım.					
44. Öğrencilerime derste öğrendikleri bilgileri günlük yaşam problemlerinin çözümünde kullanmalarını sağlayacak ödevler veririm.					
45. Sınıfta gerçek ya da model materyaller ve kaynaklar kullanırım.					

	Her zaman	Sık sık	Ara sıra	Nadiren	Hiç
46. Soru sorduktan sonra öğrencilerime düşünmeleri için yeterli zaman veririm.					
47. Öğrencilerimin birbirlerine soru sormalarını teşvik ederim.					
48. Öğrencilerimi, konuyla ilgili tartışmaya teşvik ederim.					
49. Konuyu öğretmeden önce öğrencilerimin o konuyla ilgili ön bilgilerini sorarım.					
50. Öğrencileri aktif hale getirmek için ders planlarıma etkinlikler koyarım.					
51. Öğrenilenleri sınıf içinde değerlendirmek amacıyla öğrencilere sorular sorarım.					
52. Öğrencilerimin dersi yönlendirmelerine (içeriği ve öğretme stratejilerini belirleme gibi) izin veririm.					
53. Öğrencileri konuya ilgi uyandıran sorunlara yöneltirim.					
54. Farklı derslerde öğrendikleri konuları ilişkilendirebilmeleri için öğrencilere rehberlik yaparım.					
55. Öğrencilerimin düşüncelerini dersleri zenginleştirmek amacıyla kullanırım.					
56. Öğrencilerin ilgilerine göre dersimi uyarlarım.					
57. Öğrencilerin gün içerisinde öğrendiklerini değerlendirmek için önlemler alırım.					
58. Derste öğrencilerin bilgileri keşfetmesine fırsat verecek etkinlikler düzenlerim.					
59. Farklı öğretme strateji, yöntem ve teknikleri (buluş yolu, yaratıcı drama, proje vb.) ile öğrencilerin farklı öğrenme ihtiyaçlarına cevap vermeye çalışırım.					
60. Öğrencilerime problem çözme, akıl yürütme gibi üst düzey düşünme becerilerini kazandıracak öğrenme yaşantıları sağlarım.					
61. Öğrencilerimin dersler arasında ilişki kurmalarını sağlarım.					
62. Araştırma yoluyla bilgiye kendilerinin ulaşmaları için öğrencilerimi yönlendiririm.					
63. Öğrenme-öğretme sürecinde öğrencilerin bireysel farklılıklarını dikkate alırım.					
64. Öğrenme-öğretme süreci sonunda kendimi de değerlendiririm.					
65. Alternatif değerlendirme yöntemleri (akran, grup, öz, portfolyo, vb.) kullanırım.					
66. Öğrencilerimin bireysel farklılıklarını dikkate alarak öğretimi planlarım.					
67. Yeni öğretim programlarına göre dersi planlarım.					
68. Yeni eğitim programlarını daha iyi uygulayabilmek için meslektaşlarımla iş birliği yaparım.					
69. Öğrencilerin yaşadığı karmaşayı öğrenme kaynağı olarak kullanırım.					
70. Öğrencilerimi, düşüncelerini sorgulamaya teşvik ederim.					
71. Derslerde öğrenme hedeflerini öğrencilerimle tartışarak kararlaştırırım.					
72. Derslerde öğrencilerimin bir konunun farklı bakış açılarını inceleyerek öğrenmelerini sağlarım.					

	Her zaman	Sık sık	Ara sıra	Nadiren	Hiç
73. Öğrencilerimin öğrendikleri bilgileri kullanmalarını sağlayacak uygulama etkinlikleri yaparım.					
74. Öğrencilerimin kendi deneyimlerini akranlarıyla paylaşmalarını sağlarım.					

E) EĞİTİM PROGRAMI DEĞİŞİKLİKLERİ İLE İLGİLİ AÇIK UÇLU SORULAR

1. Yeni eğitim programları ile ilgili eksik olduğunuzu / öğrenmenizde yarar olacağını düşündüğünüz bilgi / beceriler varsa lütfen belirtiniz.

2. Yeni eğitim programlarının uygulanması konusunda karşılaştığınız sorunlar varsa belirtiniz (öğrenci, veli, öğretmen, okul ve sınıf ortamı, materyaller, ders kitapları, vb.)

APPENDIX B

SCATTERPLOTS

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