INVESTIGATING THE RELATIONSHIP BETWEEN TEACHERS' SENSE OF EFFICACY AND PERCEIVED OPENNESS TO CHANGE AT PRIMARY AND SECONDARY LEVEL PUBLIC SCHOOLS

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

DERYA YILMAZ

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN
THE DEPARTMENT OF EDUCATIONAL SCIENCES

SEPTEMBER 2010

Approval of the Graduate School of Social Sciences

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ABSTRACT

INVESTIGATING THE RELATIONSHIP BETWEEN TEACHERS' SENSE OF EFFICACY AND PERCEIVED OPENNESS TO CHANGE AT PRIMARY AND SECONDARY LEVEL PUBLIC SCHOOLS

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September 2010, 148 pages

The purpose of this study was to explore the relationship between teachers' sense of efficacy in student engagement, instructional strategies, and classroom management and perceived openness to change in schools as regards willingness of the teachers to embrace change and teachers' perception related to principal's openness to change, and teachers' willingness to respond to community pressure for change.

The research was designed as a correlational study and participants of the study consisted of 552 teachers working at primary and secondary level public schools selected from the four school districts in Ankara. Cluster sampling approach was used in selecting the overall sample of the study. In order to measure teachers' sense of efficacy and their perceived openness to change in schools, Turkish adaptation of Teachers' Sense of Efficacy Scale (TSES) and newly adapted The Faculty Change Orientation Scale (FCOS) were utilized in the research as data gathering instruments, as well as the administration of a demographic survey. For

the data analysis, both descriptive and inferential statistics techniques (Canonical Correlation Analysis) were used in the study. Exploratory Factor Analysis was also performed for Faculty Change Orientation Scale and Teachers' Sense of Efficacy Scale to ensure construct validity of the instruments.

The results of the analyses in the study indicated that there is a low relationship between teachers' sense of efficacy in student engagement, instructional strategies, and classroom management and perceived openness to change in schools as regards teachers' willingness for change, teachers' perception about principal's openness to change and teachers' willingness to respond community pressure for change.

Key words: Organizational Change, Openness to Change and Teachers' Sense of Efficacy

ÖZ

İLKÖĞRETİM VE ORTAÖĞRETİM DÜZEYİNDEKİ DEVLET OKULLARINDA ÖĞRETMENLERİN ÖZYETERLİK ALGILARI VE OKULLARINDA ALGILANAN DEĞİŞİME AÇIK OLMA DURUMLARI ARASINDAKİ İLİŞKİNİN İNCELENMESİ

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Eylül 2010, 148 sayfa

Bu çalışmanın amacı, öğretmenlerin öğrenciyle kaynaşma, öğretim stratejileri ve sınıf yönetimi boyutlarında özyeterlik algıları ve okullarında öğretmenlerin değişimi benimsemesi, yöneticilerinin değişime açık olması ve öğretmenlerin paydaşların değişime yönelik baskısına karşılık vermeleri bakımından algıladıkları değişime açık olma durumları arasındaki ilişkiyi incelemektir.

Yapılan araştırma ilişkisel bir çalışma olarak desenlenmiştir ve katılımcılar Ankara'da bulunan dört semtten seçilmiş ilköğretim ve ortaöğretim düzeyindeki devlet okullarında görev yapan 552 öğretmenden oluşmuştur. Çalışmanın genel örneklemi seçilirken küme örnekleme yaklaşımı kullanılmıştır. Öğretmenlerin özyeterlik algıları ve okullarında algıladıkları değişime açık olma durumlarını ölçmek amacıyla, Türkçe adaptasyonu yapılmış olan Öğretmen Özyeterlik Ölçeği ve yeni adapte edilen Öğretmen Değişime Yönelim Ölçeği'nden, uygulanan demografik anketin yanı sıra, veri toplama aracı olarak faydalanılmıştır. Veri

analizi olarak, çalışmada betimsel ve yordamsal (Kanonik Korelasyon Analizi) istatistik metotları kullanılmıştır. Öğretmen Özyeterlik Ölçeği ve Öğretmen Değişime Yönelim Ölçeği'nin betimleyici faktör analizleri de araçların yapısal geçerliğini sağlamak amacıyla çalışma kapsamında uygulanmıştır.

Çalışmada yapılan analizlerin sonuçları öğretmenlerin öğrenciyle kaynaşma, öğretim stratejileri ve sınıf yönetimi boyutlarında özyeterlik algılarıyla okullarında öğretmenlerin değişimi benimsemesi, yöneticilerinin değişime açık olması ve öğretmenlerin paydaşların değişim baskısına yönelik karşılık vermeleri bakımından algıladıkları değişime açık olma durumları arasında düşük bir ilişki olduğunu göstermiştir.

Anahtar Kelimeler: Örgütsel Değişim, Değişime Açık Olma ve Öğretmenlerin Özyeterlik Algıları

To my future's architect…

and

To my parents and lovely sister…

ACKNOWLEDGEMENTS

The competition of this expedition is the shared efforts of so many people in my life to whom I am indebted. By means of their support and guidance, I have achieved my work in accompany with meaningful endeavor, challenging experiences, and unforgettable memories.

First and foremost, I am endlessly grateful to my supervisor, Assist. Prof. Dr. Yaşar Kondakçı for his sincere guidance and support not only through my thesis process but also during my Master's studies. His encouragement, confidence, and trust empowered me to conduct such a thorough research. I am heartily thankful to his unending support and patience.

My genuine appreciation goes to my committee members, Assist. Prof. Dr. Hanife Akar and Dr. Refika Olgan. I am grateful for the guidance and valuable feedback they provided, which improved the direction and quality of this thesis.

I extend my special thanks to my love, my friend, and my confidant, N. Atakan Palaşoğlu, for his everlasting support and persistence over the years, unending love, and emphatic understanding that helped pull me through in front of intimidating circumstances. I thank him for his patience and standing beside me across my frustrations along the way.

I am especially grateful to Merve Zayim for her ongoing support, friendship, and willingness to help every step of the way. I appreciate her contributions to my study by offering suggestions and providing constructive criticism. I would like to thank her sincerity and assistance throughout the process ever since our undergraduate years.

I would like to express my gratitude and appreciation to all of my friends who believed in me and gave me tremendous support. Special thanks to my dearest

friend, İkbal Laleci Yorulmaz for being a constant encourager with inspiring poems and always being there unconditionally over the years. I would like to express my deepest thanks to my friend, Zeynep Delier for her intimacy, encouragement, absolute positive regard, and sharing cheerful conversation all the time.

I also appreciate to Filiz Keser, Esra Eret, and Tuba Fidan for their assistance and patience provided to me in adaptation of the research instrument and their valuable contributions during data analysis for this study.

I wish also to thank the unseen faces in this work, especially teachers who formed the sample of this study with providing valuable information in their busy schedules and the school principles that assisted in my research while collecting data.

Most importantly, I would like to thank my family who believed in me to persist through this arduous process with a perpetual source of love, strength and motivation. I am eternally grateful to my sister, Deniz Yılmaz for her encouragement, unconditional love and patience not only through my studies but also during exhausting times in my life.

I would like to express my appreciation to my mother, Yasemin Yılmaz for her support, immeasurable love and continuous belief in my abilities. Finally, special thanks to my father, Muhittin Yılmaz for the sacrifices he made for me to get an education, his words of encouragement and providing me with the opportunities to reach all of my goals and aspirations in my life. Without their unwavering support and understanding, completing of this endeavor would not have been possible.

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LIST OF ABBREVIATIONS

ABBREVIATIONS

MONE: Ministry of National Education

EU: European Union

ICT: Information and Communication Technologies

PASW: Predictive Analytics Software

EFA: Exploratory Factor Analysis

SD: Standard Deviation

M: Mean

KMO: Kaiser-Mayer Olkin

FCOS: Faculty Change Orientation Scale

TES: Teacher Efficacy Scale

TSES: Teachers' Sense of Efficacy Scale

TLC: Teacher Locus of Control

RSA: Responsibility for Student Achievement

STEBI: Science Teaching Efficacy Belief Instrument

OSTES: Ohio State Teacher Self-Efficacy Scale

TTSES: Turkish version of the Teachers' Sense of Efficacy Scale

SE: Student Engagement

IS: Instructional Strategies

CM: Classroom Management

PTA: Parent Teacher Association

CHAPTER I

INTRODUCTION

In this chapter, the reason for studying on teachers' sense of efficacy and their perceived openness to change in schools with its background information, the purpose of the research, the significance of the study, and definition of terms are presented in detailed.

1.1. Background of the Study

Organizations are expected to meet the demands and challenges of external environment caused by new technologies and working conditions in order to stay competitive. Many of the organizations are faced with changes at the same time and they undertake these changes to ensure survival chances. Expansion of uncertainty, competitive market places, and developments in technology lead to new ways of working, different course of movements and innovations toward globalization by means of Internet and e-business, regarding the needs of the customers and improving the quality in organizations are all increase the importance of change (Clegg & Walsh, 2004). This context presents that developing science and technology with rapid movements influences economic systems and society seriously. Therefore; transformed societal structures, social interactions and manner of working make organizations confront with a challenging change process. In order to get through this formidable process, organizations do not take into account the individual factors whereas they handle the process at organizational level. In this context, it is necessary to address that change process is affected by both individual and group dynamics (Quinn, 1996; Burke, 2008). More importantly, change actions start in individuals and when individuals alter their attitudes and behaviors, change is accomplished in

organizations (Whelan-Berry, Gordon & Hinings, 2003). Hence, it is essential to emphasize individual and group dynamics for understanding successful change practices.

While continuous developments occur in the external environment, there is range of triggers forcing organizations towards change initiatives. These triggers include elements within and outside the organization. Some of the main external factors can be ranked as law and regulations of the government, globalization of markets and adopting the standards and values of business, main political and social events, improvements in technology, organizational growth and expansion, and fluctuations in business cycles (Dawson, 2003). On the other hand, the internal factors that promote organizational change proposed by Leavitt (1964) are technology (e.g. plant, machinery and tools), primary task (e.g. the major field of business), people (e.g. human resources constituting the organization) and administrative structures (e.g. formalized lines of communication, formation of working procedures, managerial hierarchies, reward systems and disciplinary procedures). These external and internal factors are all associated for determining the speed, direction and outcomes of change in an organization (Dawson, 2003).

However, people differ with regard to their perception towards change; some of them may consider change with a lower tolerance (Carnall, 1999). Even though external and internal environments force organizations towards change, people in the organizations may resist changing due to some reasons. One of the main reasons why people resist change initiatives is that change creates ambiguity and uncertainty by weakening the continuity of working environment. Change is refused by people due to the factors such as the judgment of change in skill requirements, threat to employment, psychological threat, disruption of work environments, and redefinition of authority status (Dawson, 2003). Despite the need for change in organizations, a study indicated that one third of all change initiatives are found successful while the rest is failed (Beer & Nohria, 2000b). The reason why change initiatives fail is associated with the feelings of anxiety,

uncertainty, ambiguity and negative emotions in employees, which come along with change attempts (Bordia, Hobman, Jones, Gallois & Callan, 2004; Kiefer, 2005). These negative feelings concerning resistance to change are considered as indicators of unwillingness to support change (Judson, 1991).

Even though organizational change is considered as alterations in technology, hierarchy or in structures in the organization, it is clear that change has tremendous impact on the individuals (Schein, 1980). The reason why many organizations fail to accomplish change initiatives is related to underestimating the impact of change on the individual (Kavanagh & Ashkanasy, 2006). Therefore, neglecting psychological perceptions of employees toward change leads to the failure of change initiatives in organizations (Devos & Buelens, 2003). Though, for successful change initiatives, it is required to manage the psychological transition of employees effectively (Armenakis & Bedian, 1999; Martin, Jones & Callan, 2005). In order to adapt an individual to the dynamic and global business environment, openness to change is found as an important element (Armenakis & Bedian, 1999). Since openness to change is related to extent to which employees support change willingly and their degree of positive perception concerning the potential consequences of change (Miller, Johnson & Grau, 1994), openness to change is accepted as a proposition for readiness for change and a decisive factor for determining the success of organizational change (Armenakis, Harris & Field, 1999). Openness, commitment and motivation for change among employees affect the ability and proceed of the organization towards change (Armenakis, Harris & Mossholder, 1993; Bernerth, 2004). Hence, analyzing the elements enhancing employee openness to change is significant for pointing out how organizations make sure employees as being willing to support and participate in change processes.

Like the case of for-profit organizations, non-profit organizations (e.g., schools) undergo technological, structural, social and financial changes (Levin, 1993). They change overtime due to the external pressures by the changing environment

around them. In fact, it is necessary to maintain the stability of the schools and demonstrate improvement for effective education. Therefore, it is important to contribute continuous improvement for changing conditions in order to achieve school effectiveness. Change practices in schools consist of various approaches in curriculum, different management structures, new educational programs and group of students and teachers having different backgrounds. In order to adjust these changes, schools are required to be flexible; be able to propose organizational strategies when they are faced with change (Rosenblatt, 2004).

Changing nature of technology and economy influence societies and increase the stakes for education. As societies diversify and being fragmented, schools remain as unifying centers for individuals in a society (Lieberman & Grolnick, 2005). Each country endeavors for an adaptation of its education system to the changes in social, cultural, economic, technologic and scientific areas. In Turkey, there is a centralized education system and the Ministry of National Education (MONE) governs the education in schools. MONE makes decisions related all educational policy and controls the implementation of these policies (Akyuz, 2001). Being as a candidate for the membership of European Union (EU), Turkey is expected to fulfill the strategic objectives of EU for enabling quality education and evaluate the status of its education system (Aksit, 2007; Gokçe, 2009; Grossman, Onkol & Sands, 2007). From the date of December 2004 as a candidate country for the EU, Turkey upgraded its provision and implemented some changes in its education system (Aksit, 2007). With the adoption of constructivist approach, curricular, functional and structural changes occurred in education system of Turkey. These changes include implementations of MONE's policies like alterations in physical infrastructures of schools, use of Information and Communication Technologies (ICT) in instruction and administrative procedures for creating e-school system, curriculum diversification and total quality management applications. As a result, the demands from educational institutions create new form of problems in education.

In organizational and educational change applications, antecedents of successful and sustainable reforms affiliated with personality, personal development and attitudes of individuals' towards change (Aslan, Beycioglu & Konan, 2008). Likewise, attitudes of employees toward change mostly depend on organizations' culture, leadership style of the management and nature of the organization (Rashid, Sambasivan & Rahman, 2004). Consequently, it is important to focus on culture of the organization, attitudes, beliefs and perceptions towards change to acknowledge how successful change initiatives may be performed in schools. At this point, the role of teachers in school organizations increases because it is difficult to implement changes in school setting if teachers do not approve and embrace change initiatives. In order to get teachers' commitment for change, it is necessary to enable the cooperation of the purposes of change and the purposes of teachers in schools. Therefore, teachers are needed to be part of change processes (Balcı, 1993).

However, organizations have tendency to undertake previously experienced changes again since earlier experienced successful situations encourage openness to change in the future (Kelly & Amburgey, 1991). When school setting is considered, subject field of the teachers (Goodson, 1988) and personal orientations towards change (Hall & Hord, 1987) influence teachers' response towards change. Moreover, attitudes towards change are found to be associated with personality characteristics (Lau & Woodman, 1995; Wanberg & Banas, 2000). Specifically, internal locus of control that deals with individuals' ability to control over the environment is one of the most important predictors for openness to change (Lau & Woodman, 1995). If this situation is taken into account in educational context, teachers' sense of efficacy levels may be associated with the faculty's and principals' openness to change as perceived by the teachers. Since personal factors and the external environment are in reciprocal determinism in social cognitive theory (Bandura, 1997), teacher efficacy is revealed to be related to organizational health of the school (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998). Furthermore, school context variables such as organizational structure,

participation of teachers in decision making processes, climate of the school, principals' leadership style with supporting innovation and collective efficacy are found to be associated with teachers' sense of efficacy (Tschannen-Moran et al., 1998). Hence, it can be argued that teachers' perceived openness to change in schools is related to teachers' sense of efficacy. Specifically, openness to change, attitudes towards change, and teachers' sense of efficacy may be seen as important factors for successful change interventions. As a consequence, this study aims to examine the relationship between teachers' sense of efficacy and perceived openness to change in schools. In other words, this study is believed to contribute to the literature in that it examines the relationships between teachers' sense of efficacy as a personality factor and perceived openness to change as a school context factor.

1.2. Purpose of the Study

The dynamic external and internal environments of organizations inevitably push educational organizations or school systems to change aspects in their structural and functional characteristics (Şişman & Taşdemir, 2008). Even though there is great number of change initiatives in regard to education in the last 25 years, the success rate has remained very limited (George, White & Schlaffer, 2007). Currently there are several change interventions undergoing in Turkish schools at all levels. Most of these changes are designed and implemented by MONE. However, some other changes are forced by internal and external environments of individual schools. Hence, it can be argued that schools in Turkey are surrounded with a variety of forces of changes. In this context, teachers' attitudes towards change interventions become critical for the success of change. Explaining the relationships between different psychological constructs and openness to change adds to the current body of knowledge for practicing change in schools. Due to the limited number of studies on openness to change and teacher efficacy in schools as an individual factor, the purpose of this study is to assess the relationships between teachers' openness to change and their sense of efficacy.

1.3. Research Question

This study was conducted to address the research question in the following:

- Is there any significant relationship between teachers' sense of efficacy (in student engagement, instructional strategies, and classroom management) and perceived openness to change (at faculty and principal levels, and community pressure for change)?

1.4. Significance of the Study

There is a solid body of research documenting various aspects of organizational change in the literature. According to Armenakis and Bedeian (1999) there is also a theoretical framework integrating the literature of organizational change in terms of content, context and process factors in change context. Despite the wide body of theoretical and practical knowledge, the success rate is moderate and the failure rate is high (Devos, Buelens & Bouckenooghe, 2007). High failure rate leads to loss of human and financial resources (Beer & Nohria, 2000a). One reason behind high failure rate is concentrating on technical and financial side of change while ignoring the human side of change. However, researchers emphasize the micro level perspective of change by examining the individuals in an organization with considering psychological factors that affect change attempts (Bray, 1994; Wanberg & Banas, 2000). It is asserted that why change attempts fail is due to underestimating the human factor and organizations' nature as regards cognitive-affective domain (Kavanagh & Ashkanasy, 2006). Since there is limited research investigating micro level perspective of organizational change, this study is believed to present a substantial contribution to organizational change literature in school context by exploring micro level perspectives of organizational change in terms of human factor as personality disposition.

Limited research on openness to change as an attitude toward change in relation to psychological constructs is evident for the field of educational administration in Turkey as well. Studying change in educational organizations and widening the knowledge base for guiding change practices in schools becomes necessary in the face of growing number of change interventions in educational organizations. Hereby, this study is addressing the need for further research on organizational change in Turkish schools. Another contribution of this study to the literature is that most of the studies, at least in Turkish literature, on different domains of educational administration use the principals as subjects of studies (Aslan et al., 2008). There is a need to conduct studies with other constituencies in school setting. Particularly teachers are a very critical group because their attitudes largely determine the success of change. Finally, this study has a potential to understand change orientations in schools from the perspective of teachers. By means of this, teacher educators, policy makers and school principals could use the gathered data to initiate a meaningful inquiry into how they might increase the faculty's receptivity to change.

Although there are many studies conducted concerning efficacy of teachers in the classrooms, there is limited number of studies investigating the relationship between school context variables on teachers' efficacy. Hence, this study addresses the need for research concerning school context factors that have impact on teachers' sense of efficacy in Turkey.

Furthermore, this study contributes to research on openness to change. In this study, Faculty Change Orientation Scale was adapted into Turkish. This study can be considered as a contribution to its validation process. In this study the scale was translated into Turkish, piloted with a sample of 136 teachers and then administered to a sample of 552 teachers. Subsequently exploratory factor analysis was conducted. After all these studies, the instrument has been available for further research on openness to change in Turkey.

Particularly, this study is unique and pioneering in that it investigates the relationship between teachers' perceived openness to change and their sense of efficacy since they relate to a relationship having limited studies in the literature. As a result, the findings of this study are expected to contribute to the knowledge base on theory and practice of change in educational settings in Turkey.

1.5. Definition of Terms

There are several critical terms and concepts used in this study. Each of these terms and concepts are defined below in order to ensure a shared meaning on the part of the reader:

Attitudes towards change refer to individual's cognition about change, affective reactions and tendencies toward change (Elizur & Guttman, 1976).

Change refers to "the movement from one state to another" (Hargreaves, 2004, p.287).

Change orientation refers to the inert willingness of individuals within an organization for transformation of leading toward individual or group improvement (Kearney & Smith, 2009).

Community is the group of individuals gathered together with the same ideas and objectives (Sergiovanni, 1994).

Community pressure for change is defined as "the receptivity of internal stakeholders to externally pressed changes" (Kearney & Smith, 2009, p.23).

Culture refers to shared philosophies, ideologies, beliefs, feelings, assumptions, expectations, attitudes, norms and values of the organization that are considered as the organization's characteristics (Kilmann, Saxton & Serpa, 1985).

Efficacy is defined as judgments with respects to ability to perform actions necessary to achieve desired outcomes (Bandura, 1977, 1997).

Efficacy in classroom management is extent to which teachers control disruptive behaviors of students and set up a classroom management system with some routines in the class (Tschannen-Moran & Woolfolk-Hoy, 2001).

Efficacy in instructional practices is extent to which teachers use various assessment techniques, alternative strategies and contribute to appropriate challenges in the classrooms (Tschannen-Moran & Woolfolk-Hoy, 2001).

Efficacy in student engagement is extent to which students are helped and motivated by the teachers in order to improve their understanding and foster their creativity (Tschannen-Moran & Woolfolk-Hoy, 2001).

Faculty openness to change is defined as the teachers' receptivity to varying degrees of internal and external changes (Kearney & Smith, 2009).

Openness is defined as "the extent to which relevant information is not withheld; it is a process by which individuals make themselves vulnerable by sharing information with others" (Hoy & Tschannen-Moran, 1999, p. 188).

Openness to change refers to as "willingness to support change and positive affect about the potential consequences of change" (Miller et al., 1994, cited in Wanberg & Banas, 2000, p. 132).

Organizational change is defined as turning of the organization in another direction by modifying the traditional ways done in the organization, overhauling the structure of the organization (the design of the organization for decision making and accountability) and providing a new vision for the future of the organization (Burke, 2008).

Organizational climate refers to the qualities and attributes existed in an organization that brings about the way of dealing with members of the organization and the environments of the organization (Turnispeed, 1988).

Perceived self-efficacy is defined as "a judgment of one's capability to accomplish a certain level of performance" (Bandura, 1986, p.391).

Principal openness to change refers "teachers' perceptions of the willingness of the principal to embrace change strategies" (Kearney & Smith, 2009, p.28).

Self-efficacy refers to the beliefs of individuals having in their own ability to accomplish tasks (Bandura, 1997).

Teachers' sense of efficacy is defined as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplishing specific teaching task in a particular context" (Tschannen-Moran et al., 1998, p.233).

CHAPTER II

REVIEW OF LITERATURE

The review of the literature for this study provides an overview of teachers' sense of efficacy and perceived openness to change in schools by considering teachers and principals. Specifically, theoretical framework for this study includes studies concerning openness to change and research on openness to change in school setting in addition to social cognitive theory, self-efficacy, teachers' sense of efficacy and its foundations. Firstly, the construct of openness to change is introduced under the concept of organizational change. The description of openness to change with its predictors and outcomes is presented beside to considering openness to change in school setting. This is followed by the section that examines self-efficacy beliefs with underlying theory behind it which is social cognitive theory. Further, teachers' sense of efficacy with its foundations and correlates of teacher efficacy in school setting is presented. A review of literature regarding teachers' sense of efficacy and openness to change comprises the final part section of this review of literature.

2.1. Organizational Change

Change is defined by Hargreaves (2004) as "the movement from one state to another" (p.287), while Quinn (1996) has stated change as an act of alteration, adjustment or transformation in a thought, application or belief. At the same time, Burke (2008) has expressed organizational change as turning of the organization in another direction by modifying the traditional ways done in the organization, overhauling the structure of the organization (the design of the organization for decision making and accountability) and providing a new vision for the future of the organization.

Organizational change is acknowledged differently by researchers and various aspects of change have been analyzed in order to ascertain the meaning of organizational change. In essence, the nature and levels of organizational change, the content and process of organizational change have been examined in addition to proposition of conceptual models and theoretical framework sources for organizational change (Bouckenooghe, 2009; Burke, 2008; Mills, Dye & Mills 2009). In this respect, organizational change can be approached in various aspects; individual or collective, incremental or deep, internal or external (Burke, 2008; Quinn, 1996), theoretical framework with the content, context and process factors (Armenakis & Bedeian, 1999) and in educational setting; teacher or principal (Kearney & Smith, 2009).

Nevertheless, the effect of psychological factors in micro level perspective with regarding cognitive-affective nature of organizational change is considered, the importance of attitudes toward change has been revealed (Bray, 1994; Kavanagh & Ashkanasy, 2006; Wanberg & Banas, 2000). The literature present that attitudes towards change can be in the form of positive and negative psychology focus. Attitude related constructs like readiness for change, openness to change, commitment to change, adjustment to change and acceptance of change regarded as positive attitudes towards change while resistance to change, cynicism about organizational change, coping with change considered as in negative psychology tradition (Bouckenooghe, 2009; Vakola & Nikolaou, 2005; Vakola, Tsaousis & Nikolaou, 2004; Yousef, 2000). It is asserted that both negative and positive psychology views may be adapted continuous function of positive change (Bagozzi, 2003). Openness, commitment and motivation of individuals are found as drive factors affecting ability and drive of organization to change (Armenakis et al. 1993; Bernerth, 2004). Likewise, extent attitudes toward organizational changes are influenced by contextual factors like going on changes and personal factors like self-efficacy (Herold, Fedor & Caldwell, 2007). On the other hand, when school setting is taken into account, teachers' being openness to change as regards individual and organizational level can be considered as an opportunity

for organizational development (Kearney & Smith, 2009). Therefore, teachers' openness to change in terms of personality disposition has great importance in educational organizations.

2.2. Defining Openness to Change

Although the phenomenon of change has been widely investigated in the field of organization science, there is limited number of empirical studies on openness to organizational change. Openness to change can be described as one of the attitudes to change. Before mentioning the definition of openness to change, it is necessary to ascertain the meaning behind openness. *Openness* is defined as the extent to which an individual accept experiences, present responsive thinking, share information for the progress of others with expecting the protection of his or her well-being (Petersen, 2008). Hoy and Tschannen-Moran (1999) also described openness as "the extent to which relevant information is not withheld; it is a process by which individuals make themselves vulnerable by sharing information with others" (p. 188). On the other hand, openness to change is analogous to one of the steps of Lewin's three step process of change, which is *unfreezing* and relevant to the concepts of creating motivation and readiness to change (Lewin, 1951). *Openness to organizational change* is defined by Miller et al. (1994) as "(a) willingness to support the change and (b) positive affect about the potential consequences of the change (e.g., feeling that the changes will be beneficial in some way)" (cited in Wanberg & Banas, 2000, p. 132). As Miller et al. (1994) asserted, proposition and implementation of openness to changes in an organization is a "necessary, initial condition for successful planned change" (p. 60).

High level of openness to an organizational change secures cooperation between change agency and organizational members and reduces the risk of resistant behaviors like hostility, quarrelling, deliberate restriction of production and lack of cooperation in an organization (Miller et al., 1994). Openness to change has a

key role on adaptation of individual's dynamic and diverse global business environment (Armenakis & Bedeian, 1999). In a cross-national study conducted in USA, Western Europe, Eastern Europe, Middle East and Asia, openness to change was found to be the most important leadership characteristics as it creates a culture that makes execution of organizational strategy most likely (Management Center Europe, 2005). In the same study, it was also found that openness to change is the most significant asset of corporate culture that leaders should build for making successful changes.

According to Fugate and Kinicki (2008), openness to change is related with dispositional employability, which refers to individual differences that encompass individuals for reactive and proactive orientation to adaptability in terms of knowing the demands of the environment and having perpetual readiness for change. Dispositional employability perspective suggests that being open to new experiences fosters continuous learning and make individual to understand career opportunities and improve adaptability of the individual. Since open people consider change as a challenge rather than a threat, they are willingly to accept new technologies and processes (McCartt & Rohrbaugh, 1995) and become adaptable for requirements of dynamic working conditions with being more employable (Fugate & Kinicki, 2008).

2.2.1. Predictors of Openness to Change

When the related literature is reviewed as regards predictors of openness to change, there are numerous factors that influence openness to change in organizations. More specifically, *individual-differences factors* such as self-esteem, optimism, perceived control, internal locus of control (Devos et al., 2007; Lau & Woodman, 1995; Taylor & Brown, 1988; Wanberg & Banas, 2000), change related self-efficacy (Armenakis et al., 1993; Wanberg & Banas, 2000) and personal impact of the changes (Ashford, 1988; Wanberg & Banas, 2000); *content-base factors* like type of the change as being first-order and second-order

changes (Bartunek & Moch, 1987; Burke, 2008; Greenwood & Hinings, 1996; Porras & Robertson, 1992) or outcomes of change types (Beer & Nohria, 2000a; Devos et al., 2007; Self, Armenakis & Schaninger, 2001); *contextual factors* such as trust (Albrecht, 2002, Daley, 1991; Gomez & Rosen, 2001; Sitkin & Bies, 1993), history of change (Bernerth, 2004; Reichers, Wanous & Austin, 1997; Schneider, Brief & Guzzo, 1996), *process factors* like participation of the employees in change process (Armenakis & Harris, 2002; Bordia et al., 2004; Devos et al., 2007; Kotter, 1995; Msweli-Mbange & Potwana, 2006; Sagie, Elizur & Koslowsky, 1990; Wanberg & Banas, 2000), communication during organizational change process (Allen, Jimmieson, Bordia & Irmer, 2007; Armenakis & Harris, 2002; Chawla & Kelloway, 2004; Ertürk, 2008; Penley and Hawkings, 1985; Smeltzer, 1991), information about change (Milliken, 1987; Schweiger & DeNisi, 1991; Wanberg & Banas, 2000), knowledge sharing (Alavi & Leidner, 2001), and social support (Mallinckrodt & Fretz, 1988; Shaw, Fields, Thacker & Fisher, 1993; Wanberg & Banas, 2000). These factors affecting openness to change as regards individual-differences, content-base, contextual and process are all presented in Figure 2.1.

Figure 2.1 Conceptual Model of Predictors and Outcomes of Individual Openness to an Organizational Change

Adapted from: Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology, 85,* 132-14.

2.2.1.1. Individual-Differences Factors

The impact of personality characteristics on getting over organizational change are examined by several scholars (Lau & Woodman, 1995; Wanberg & Banas, 2000). Individual-differences variables which are related to employee reactions to change depend on cognitive adaptation theory (Aspinwal & Taylor, 1992). According to cognitive adaptation theory, it is stated that people who have highest levels of well-being against stressful situations in their life also "have high levels of *self-esteem* (e.g., high sense of self-worth), *optimism* (e.g., high positive outlook towards life), and *perceived control* (e.g., a view of life and situations as being under personal control)" (Taylor & Brown, 1988, cited in Wanberg & Banas, 2000, p. 133). These three variables form the concept of *resilient personality* (Major et al., 1998). This is verified in a study conducted by Wanberg and Banas (2000), in which they found that higher levels of resilience (self-esteem, optimism and perceived control) is related to higher levels of openness to change in a reorganizing workplace.

Internal locus of control emerged as another predictor of openness to change. Internal locus of control is associated with perceived control and defined as individual's perceptions of his or her ability to control over the environment (Rotter, 1966). Internal locus of control was suggested as one of the key variables for several positive individual traits and attitudes including openness to change. It is found to be related to increased openness to change (Lau & Woodman, 1995) and increased job satisfaction after the change process in the organization (Nelson, Cooper & Jackson, 1995). Likewise, Devos et al. (2007) also asserted that there is a relationship between internal locus of control and openness to change.

Change related self-efficacy is another individual factor for openness to change, related to the perceived ability of individuals to succeed changes in proposed situations and fulfill well on the job with the demands of change (Wanberg &

Banas, 2000). Likewise, Conner (1992) asserted that when individuals are not certain about their abilities, they do not perform well in organizational change settings. Armenakis et al. (1993) also claimed that individuals stay away from activities if they think that activities go beyond their abilities and individuals perform those activities if they believe that they are competent enough. In a study, change related self-efficacy confirmed to be the factor affecting openness to an organizational change, in which Wanberg and Banas (2000) found that increased self-efficacy for dealing with proposed changes are related to greater change acceptance. Similarly, in another study performed by Herold et al. (2007), it was asserted that people who feel to be sure themselves while handling the change due to having high change specific self-efficacy are less negatively influenced by the changes of the workplace; hence, they become committed to encourage changes.

However, it was found that there is no association between demographic characteristics such as gender, age, seniority and education with openness to change in the study conducted by Devos et al. (2007). In another study, it was revealed that age and organizational tenure are negatively associated with openness to change and educational level of the CEOs (chief executive officer) is positively related to openness to change (Datta, Rajagopalan & Zhang, 2003).

Personal impact of the changes which is related to the total amount of perceived effect against a certain change on people or working environment of the individual works on for probable predictor for openness to change according to Wanberg and Banas (2000). Ashford (1988) asserted that when people feel change in their place of work influence them in a direct manner like promoting disturbance to their business endure greater stress. Nevertheless, it was found in Wanberg and Banas's research that there is no relationship between perceived personal impact of the changes and openness to change.

2.2.1.2. Content-Based Factors

Content of change is identified with the type of the change by considering "what" question of change (Armenakis & Bedeian, 1999). *Type of change* is classified by the researchers as first-order and second-order changes (Bartunek & Moch, 1987; Burke, 2008; Porras & Robertson, 1992). First and second order changes are conceived by the researchers by considering the difference between convergent change that occurs progressively and radical change that encloses in a short time with fundamental disruption (Greenwood & Hinings, 1996). First and second order changes are also framed according to the difference as being incremental change or transformational change (Sammut-Bonnici & Wensley, 2002). First-order changes concern to small scale and less severe changes which deal with inactivity in organization by improving efficiency while second-order changes are related to more rooted and revolutionary changes (Levy & Merry, 1986) which include definite transformation in the organization (Devos et al., 2007). The findings imply that second order changes as being large scale changes disturb the order of employee's life and bring about uncertainty related to the results of the change interventions. Hence, employees may likely to resist these changes and openness to change is expected to be decreased in such cases.

In terms of the outcome of change types, types of change are also categorized as economic driven changes and changes encouraging the capabilities of the organizations (Beer & Nohria, 2000a). Economic driven changes emphasize structure and systems with directing at creating economic worth in order to cause less costs. Downsizing and reorganization are the most characteristic of economic driven changes causing layoffs. While changes supporting capabilities of the organizations are directly related to culture, behavior and attitudes that are less threatening for employees and they do not cause job losses. The findings address that dismissal of employees from their jobs due to economic driven transformations like downsizing and reorganization may bring about decrease expectancy of openness to change in organizations while less threatening

changing environments that support capability of the organization may facilitate openness to change. Self et al. (2001) distinguished between changes that cause severe impacts on the lives of employees like job losses and changes that have less serious impacts on employees. In a study conducted by Devos et al. (2007), it was found that threatening organizational changes that cause severe job losses result in lower levels of openness to change in the workplace than the organizational changes that do not cause job losses.

2.2.1.3. Contextual Factors

Contextual factors concern the failure of change initiatives in organizations which also do not depend on the content of the change (Johns, 2006). According to studies performed by researchers, culture and climate of the organizations are determinants in maintaining of organizational change (Jones, Jimmieson & Griffiths, 2005). *Trust in executive management* and *trust in the supervisor* have influence on employees' attitudes toward change (Albrecht, 2002). *Trust* is defined as the degree of confidence of the members in a group towards their leaders' goodwill; that is, extent to which the members of the group rely on their leader as being trustworthy, truthful and unprejudiced while considering their positions (Folger & Konovsky, 1989; Korsgaard, Schweiger & Sapienza, 1995). Depending on studies conducted by researchers, developing trust relationship between employees and managers is the basic asset of change initiatives (Gomez & Rosen, 2001) and approval of change in organizations is achieved by means of trust in management (Rousseau & Tijoriwala, 1999). When social accounts perspective is considered, if employees think that management shows fairness and consideration, employees will more likely to support change whereas if the employees have less trust in management, employees will show decreased level of readiness for change (Sitkin & Bies, 1993). It is also asserted that association between employees and their supervisors can also has an important role among employees while supporting change (Edmondson & Woolley, 1999). If subordinates think that supervisors cannot trust for providing help, subordinates

will think it is very difficult to overcome changes in the organization. It is also asserted that trust in management is a critical element for successful implementation of organizational change (Daley, 1991). Likewise, trust based interaction between supervisor and the employees has an important role in change process in Turkish culture and it is found that employees' trust in their supervisors is positively associated with employees' openness to change in Turkey (Ertürk, 2008). In the same study, it is also found that employees' trust their supervisor fully mediates the effects of managerial communication on employees' openness to change, and partially mediates the relationship between employee participation and employees' openness to change in Turkey.

Furthermore, openness to organizational change is affected by *history of the change* in an organization. In other words, success or failure of major organizational changes that has performed in the previous dates is likely to affect of the attitudes of organizational members' toward current changes (Schneider et al., 1996). Indeed, employees will be reluctant to perform change initiatives if the organization failed to implement organizational changes in the past. Having high expectations followed by failure in implementing changes cause frustration among management and cynicism among employees (Reichers et al., 1997). The same study reported that that history of changes is associated with motivation for continuity to implement changes. Theoretical framework of history of change is behind Bandura's (1982) social learning theory as being significant factor for individuals' attitudes to change. Specifically, Bandura (1982) asserted that individuals' past experiences lead to construction of expectations that are related to people's ability in order to implement previously untried task before attempting. When organizations are taken into account, employees in an organization gain knowledge from their outcomes and past experiences (Devos et al., 2007). By means of having feedback from past experiences and outcomes of past actions, employees reorganize their beliefs and expectations for the future. With the accomplishment of organizational change in the past, trust of employee increases and the expectation of organization's achievement for the same attempts

are developed by the employees (Bernerth, 2004). When past change attempts are successful organizational members tend to support the current change attempts (Schneider et al., 1996) whereas when previous change attempts fail organizational members tend to develop cynical attitudes toward change (Reichers et al., 1997).

Devos et al. (2007) also found that trust in executive management and history of change are important contextual predictors for openness to change and they reported that trust in executive management and trust in direct supervisor are significantly related to openness to organizational change. More specifically, trust in executive management and trust in supervisor has equal importance for employees' attitudes to change. In fact, high trust in executive management and favorably successful history of change are related to employees' higher levels of openness to change. Besides, in the same study performed by Devos et al. (2007), it was found that when trust in executive management and successful history of change of the organization are low, there is a drastic decrease in the willingness of employees to organizational change; conversely, effects of history of the past on openness to change is stronger when trust in executive management is high.

Exposure to change which comprises implementation of a newly introduced technology during a period of time has an influence on openness to change (Axtell et al., 2002). More specifically, Axtell et al. (2002) revealed that greater exposure to change for operational employees is associated with improved openness to change compared to those with low exposure since greater exposure group believe as being involved to change with having enough knowledge and information about change. In the same research, it was also disclosed that managers and engineers with high exposition to change exhibit a state of being decreased in openness to change compared to low exposure group presenting increase openness to change (Axtell et al., 2002).

In addition to history of the organization and trust in executive management and supervisor, the *characteristics of the organization* in terms of *strategic persistence in post-succession phase* (extent to which the strategy of a firm stays stable during time) and *industry environment* (capital intensity, industry growth rate and industry advertising intensity) have influence on the ability of the new CEO to initiate strategic changes (Datta et al., 2003). Capital intensity in the research deals with "the ratio of the industry's gross book value of assets to value of annual shipments" (Lawless & Teagarden, 1991, cited in Datta et al., 2003, p. 107), industry growth rate refers to "the average annual growth rate in value of shipments" (Hambrick & Abrahamson, 1995, cited in Datta et al., 2003, p. 107) and industry advertising intensity is expressed as "advertising expenses as a percentage of sales in the industry" (Rajagopalan & Datta, 1996, cited in Datta et al., 2003, p. 107). In the research conducted by Datta et al. (2003), it was revealed that CEO openness to change is negatively related to strategic persistence in post-succession period. Besides, there is negative association between CEO openness to change and post-succession strategic persistence in high discretion environments. The same study indicated that there is negative relationship between CEO openness to change and strategic persistence in industries with high growth rates and CEO openness to change is negatively associated with strategic persistence in industries with low capital intensity. On the other hand, no relationship between CEO openness to change and strategic persistence in high or low differentiated industries is revealed in the same study (Datta et al., 2003).

2.2.1.4. Process Factors

In addition to content-based factors and contextual factors, the way for the implementation of change is also another factor that affects the reactions of employees (Armenakis & Bedeian, 1999). Callan, Terry, and Schweitzer (1995) and Ito and Brotheridge (2001) asserted that change in the structure or design of the organization like merging or downsizing, presentation of a new technology are perceived as job-threatening events by existence of uncertainty and lack of

security feelings among employees. Therefore, it is claimed that *participation of the employees in change process* has an important role for the implementation of change in order to decrease uncertainty and fear concerning change in organizations (Bordia et al., 2004).

With the help of participation, the workers have opportunity to contribute to change initiative (Wanberg & Banas, 2000). Hence, participation provides employees the chance to have an influence on the change process. Besides, participation helps organizational members to improve their personal dispositions. By means of self-discovery, employees improve their skills, knowledge, and efficacy that are required to succeed change (Devos et al., 2007). Therefore, employee participation leads to regulation and psychological possession feelings over the change (Dirks, Cummings & Pierce, 1996). In order to develop a condition which embraces readiness for change, employees' perceived control over his or her job, organization or change process is required (Cunningham et al., 2002).

Many of the studies showed that employees' participation is the main component of increasing acceptance of change in organizations (Kotter, 1995; Msweli-Mbange & Potwana, 2006). It is argued that higher degree of participation is related to a view that the changes would be beneficial and higher levels of participation is associated with higher levels of openness to changes occurring within a reorganizing workplace (Wanberg & Banas, 2000).

Participation was found to be a positively related to commitment of organizational members to change process (Armenakis & Harris, 2002). Organizational members' participation to decision making processes results in employee acceptance or openness to change (Sagie et al., 1990) and participation in the change process has an important effect on the attitudes of participants towards change (Devos et al., 2007). In a similar manner, employee participation to change process has revealed with great importance in Turkish context. Indeed,

study conducted by Ertürk (2008) pointed out that employee participation is positively and significantly associated with employees' openness to change in Turkey.

In addition, the effect of *communication during organizational process* is critical in provoking positive attitudes toward change. Managers are the individuals explaining why change is needed for organization and what should be done during the change processes. Therefore, information sharing and communication facilitate change processes and decrease the feelings about uncertainty by affecting openness to change directly and indirectly (Chawla & Kelloway, 2004). Penley and Hawkings (1985) reported stated that communication has three dimensions; namely, task communication, career communication and communication responsiveness. Task communication is related to serving functional and adequate information from their supervisors about what is expected of them during change process. Career communication encloses sufficient information with respect to training opportunities in the future when change process started. Communication responsiveness comprises the degree of supervisor's consideration and obtaining time for listening subordinates during organizational change process. The procurement of information or communication in the organization forms a crucial element for successful plan application (Schweiger & Denisi, 1991; Lewis & Seibold, 1998). Even though communication is accepted as important asset for organizational change, management of the organizations often fail the implementation of strategies without completing the purpose of quality information with employees (Smeltzer, 1991; Armenakis & Harris, 2002). Therefore, employees start to feel uncertainty and try to solve this dissuasive situation with performing information-seeking behaviors (Terry, Callan & Satori, 1996).

When Turkish context is taken into account, Ertürk (2008) revealed that all three types of managerial communication components are positively and significantly associated with employees' openness to organizational change in Turkey. Based

on other research, providing information concerning change is not enough for reducing employee uncertainty, but the quality of the provided information affects the employees' judgment for change (Bordia et al., 2004). According to the same research conducted by Bordia et al. (2004), it was pointed out that *change communication* promotes openness and positive attitudes toward change with dealing with employee uncertainty. Another study conducted by Allen et al. (2007) also showed that employees getting quality change communication indicated positive attitude toward change. Moreover, change related uncertainty in terms of strategic and job-related issues fully mediated positive relationship between quality change communication and openness to change. Indeed, quality chance communication promotes openness to change by means of decreasing uncertainty of employees related to change process.

Furthermore, *information about the change* is other important factor concerning context-specific variables for openness to an organizational change. Milliken (1987) asserted that if there is no adequate information given, individuals may not be certain about the specific changes that may occur in the future and how they influence their jobs and the organization. Besides, employee anxiety and uncertainty are reduced by the help of information received about organizational change (Schweiger & DeNisi, 1991). Significance of information about change on openness to organizational change is approved by a study in which Wanberg and Banas (2000) found that perceived information is associated with increased organizational change acceptance. More importantly it is required to emphasize that the procurement of information may not be adequate to decrease employee uncertainty; hence, perceived quality of the information is rather important for influencing employees' estimate of change (Bordia et al., 2004). Therefore, *knowledge sharing* that refers to ''the process through which one unit is affected by the experience of another'' (Argote, Ingram, Levine & Moreland, 2000, p.3) is important element within the organizations for managing constantly changing external environment and for continuous improvement processes (Alavi & Leidner, 2001).

Social support which deals with availability of the other individual for information, endearment, incentive, comfort or reassurance was studied for being possible predictor for openness to change in Wanberg and Banas's research (2000); however, it was found that there is no association between availability of support and openness to change. On the other hand, people who have more social support were found to have propensity for enduring higher levels of mental and physical health under stressful life conditions according to Mallinckrodt & Fretz (1988). In accordance with another research performed by Shaw et al. (1993), it was revealed that social support from coworkers can be useful for people attempting to handle organizational change that have influence on their daily work life.

2.2.2. Outcomes of Openness to Change

There is a gap in the literature related to how employee's reactions to certain situations, like change interventions, affect social relationships and work outcomes (Neves & Caetano, 2009). Since planned organizational changes comprise intentional actions of individuals and certain goals for creating probable outcomes (Porras & Silvers, 1991), studies related to change implementation usually emphasize the effects on the anticipated outcomes and the development of positive attitudes towards change (Cunningham et al., 2002; Eby, Adams, Russell & Gaby, 2000). However, priori benefits and losses arouse from organizational changes have been comparatively understudied except some studies (Judge, Thoresen, Pucik & Welbourne, 1999; Rafferty & Griffin, 2006; Wanberg & Banas, 2000). Based on these studies, work related outcomes, such as job satisfaction, work-related irritation, intention to turnover and actual turnover, and openness to change are only studied variables that are associated with each other (Wanberg & Banas, 2000) as presented in Figure 2.1.

2.2.2.1. Work Related Outcomes

Outcomes are the least studied aspect of openness to change in organizations. The literature suggests both positive and negative outcomes. Some positive outcomes are job satisfaction, organizational commitment, organizational citizenship behaviors, job performance and some negative outcomes are work-related irritation, intention to quit and actual turnover (Jex & Britt, 2008; Neves & Caetano, 2009; Wanberg & Banas, 2000). According to Rush, Schoel and Barnard (1995), perceived pressure of employees related to change between state government were related to increased amount of stress, which is related to lower job satisfaction and intention of quit. Likewise, work related irritation as being angry, aggravated or annoyed in the workplace is seen very high levels among individuals who think that change provides stress, frustration and distaste (Spector, 1997). In a study conducted by Wanberg and Banas (2000), it was found that lower levels of openness to changes in the workplace is associated with lower levels of job satisfaction, higher levels of work irritation and increase intentions to quit. Conversely, it was asserted in the same study that there is no relationship between lower individual levels of openness to changes and higher levels of turnover (Wanberg & Banas, 2000).

2.2.2.2. Moderating Effect of Openness to Change

In addition to outcomes of openness to change, moderating effect of openness to change should be considered when dynamic contexts have been investigated in terms of leadership style. According to Hinduan, Wilson-Evered, Moss and Scannell (2009), transformational leadership is suggested to enhance work related outcomes like job satisfaction, intention to leave and commitment to the change when employees demonstrate openness to change. In the same study, it was found that transformational leadership is positively associated with job satisfaction when followers are open to change. On the other hand, relationship between transformational leadership and intention to leave, and the relationship between

transformational leadership and commitment to change were not moderated by openness to change (Hinduan et al., 2009).

2.3. Openness to Change in School Setting

There is limited empirical research on openness to change in education setting. The perceptions of faculty toward change orientations of teachers, the principal and the community pressure for change are investigated in an educational context in terms of openness to change aspect (Aslan et al., 2008; Baylor & Ritchie, 2002; Coladarci, 1992; Goodson, 2001; Hargreaves, 2005; Hoy, Smith & Sweetland, 2002; Huang, 1993; Kearney & Smith, 2009; Tschannen-Moran & Hoy, 1998). According to Kearney and Smith (2009), three converging aspects of change are theoretically driven as regards teacher receptivity, principal's orientation towards change and receptivity of internal stakeholders toward externally pressured changes in the environment.

Within the growing body of organizational change literature, there is scarce amount of studies concerning openness to change in school context. As regards teachers' openness to change or faculty openness to change, teachers' openness is found to be associated with internalizing new ideas, having pleasure from innovations and relishing participating in change facilities in the schools (Kearney & Smith, 2009), adopting technology and utilizing from it willingly in the classrooms (Baylor & Ritchie, 2002). Furthermore, teachers' openness to change is related to climate of the school in terms of achievement press, professional teacher behavior, institutional vulnerability and collegial leadership (Kearney & Smith, 2009). Mostly investigated aspects of openness to change in educational setting is principal's openness to change that was found to be associated with principals' demographic characteristics like gender, level of education, years of experience, current in-service education, level of the school, working regions of the principals (Klecker & Loadman, 2000; Aslan et al., 2008), teacher behavior, achievement press, collegial leadership and institutional vulnerability (Kearney &

Smith, 2009). Further, environmental press or community pressure for change also influence the integrity of the school (Tschannen-Moran & Hoy, 1998) and it was revealed to be connected with professional teacher behavior, achievement press, collegial leadership and institutional vulnerability (Kearney & Smith, 2009).

2.3.1. Faculty Openness to Change

In school organization, teachers are dependent in their positions without threat and they are receptive to change facilities. Schools embracing change feel that teachers get opportunity for growth in terms of personal and organizational levels. More specifically, teachers adopt alterations by embracing new ideas, relishing innovation and accepting changes in new rules and procedures for the benefit of the school and they enjoy involving the process of change in schools (Kearney & Smith, 2009). In a study performed by Baylor and Ritchie (2002), teachers' openness to change is identified with integration of technology into the classroom willingly. Depending on this research, having tendency to try new instructional innovations and technology implementation in the class with taking risks while teaching are made functional by teachers' openness to change. Nevertheless, the studies in the literature revealed that when the teachers feel that they are secure, they become voluntary to comply with changes and contribute to change in schools (Burnes, 2004; Fullan, 1995).

Kearney and Smith (2009) also stated that faculty openness to change is related to *climate of the school* at four levels. Specifically, faculty openness to change is positively associated with *professional teacher behavior* which refers to respecting colleagues' competence, committing himself or herself to students, judging autonomously, cooperating mutually, respecting and supporting (Hoy et al., 2002). Likewise, faculty openness to change is positively related to *achievement press* which means that learning is appreciated by teachers, students and parents with respecting for academic success even though the persistence of

challenge by setting goals for students (Hoy et al., 2002). Similarly, faculty openness to change is positively associated with *collegial leadership* which refers provision of the needs of the faculty to succeed the school goals by the principle with setting high standards for teachers, being willingly, exhibiting friendly manner and regarding teachers like professionals (Hoy et al., 2002). Specifically, leadership styles were emerged as another key variable in adopting change initiatives. In fact, it was ascertained that leaders respecting and supporting their workers in an organization establish trust and confidence in their coworkers (Kotter & Cohen, 2002). By considering school context, Kearney and Smith (2009) asserted that collegial leadership creates an environment that promotes faculty openness to change. Indeed, if the principal prevent faculty from disturbing outside pressures, teachers will be more willing to receive and open to new ideas without the impact of fear aroused by the community. Meanwhile, when the teachers support each other with professionalism, coherence of teachers promote strong basis for implementing changes. On the other hand, there is a negative relationship between faculty openness to change and *institutional vulnerability* which is characterized as extent to which the school is sensitive to outside pressures such as from parents and other stakeholders of the school (Hoy et al., 2002).

2.3.2. Principal Openness to Change

In addition to teachers, principal openness to change in schools is mostly studied aspect in literature compared to other aspects which has significant role in change process. Principals can be open or resisting change initiatives in schools (Hargreaves, 2005; Goodson, 2001). Meanwhile, some of the principals resist the suggestions for change, while others adopt changes considering that change is a tool for school improvement (Stedman, 1987). Principals' openness to change is measured under three dimensions (viz., affective, cognitive and behavioral) by considering a scenario introduced to principals for getting their feelings (Klecker & Loadman, 2000). According to Dunham, Grube, Gardner, Cummings and

Pierce (1989), *affective reaction toward change* refers to "the extent to which an individual tends to enjoy change in organizations" (cited in Klecker & Loadman, 2000, p. 216), *cognition toward change* is meant as the recognition of change by an individual and providing benefit for the organization and for the members of the organization, *behavioral tendency toward change* refers to extent to which an individual takes part in change by encouraging or initiating changes. In Klecker and Loadman's study (2000), no significant relationships were found between principal's level of education, years of experience as a principal or as a teacher, current in-service education, level of the school (elementary, middle school/junior high school, high school) and his or her openness to change. Nevertheless, gender, as one of the demographic variables, was found to be significantly different towards change in the same study. The study reported that female principals are supportive and participative in school restructuring more than male principals (Klecker & Loadman, 2000). The similar study was replicated in Turkey by Aslan et al. (2008). They reported that there is a significant relationship between principals' demographic characteristics and their openness to change in three dimensions. However, their results showed that there is no significant relationship between principals' working type of the school (elementary school principals and secondary school principals) and openness to change. Similarly, there is no relationships was found between principals' programs that they finished (classroom teachers, social sciences, math and science), years of experience in the principalship, working regions of the principals (village, township, the centre of the province), principals' level of education (post secondary, bachelors, post graduate) and their openness to change. Although, principals in the research are investigated significantly open to changes in three aspects with agreeing the idea of school restructuring (Aslan et al., 2008).

In another study performed by Huang (1993), association between personality type of elementary school principals and principals' openness to change was investigated and it was revealed that female principals are more open to change in cognitive and behavioral aspects than male principals. In addition to principals'

openness to changes, teachers perceptions about the principals' openness to changes also studied by researchers in the literature. In a research conducted by Kearney and Smith (2009), extent to which faculties perceive their principal as being open to change is analyzed. According to the study, it was found that there is a significant and positive relationship between principal openness to change and professional teacher behavior, achievement press and collegial leadership while a negative association was found between principal openness to change and institutional vulnerability (Kearney & Smith, 2009).

2.3.3. Community Pressure for Change

Community pressure for change is a subset representing the receptivity of the faculty to the local community's call for change. Specifically, this subset of openness to change gauges the extent to which the faculty of a school is open to suggestions for change made by the community. The community is conceptualized as the body of citizens, stakeholders of the school, which are directly and uniquely served by the school (Kearney & Smith, 2009). In a research performed by Kearney and Smith (2009), it was found that there is a significant relationship between community pressure for change and professional teacher behavior, achievement press, collegial leadership and institutional vulnerability.

Community pressure for change also can be considered as environmental press due to referring as "strong pressure from parents and community to change school policy and influence the functioning of the school" (Tschannen-Moran & Hoy, 1998, p. 343). The necessity of the schools as protecting themselves from outside influences interfere the integrity of the schools' educational programs and their goals. Teachers are shielded by policies from disruptions caused by the injudicious demands of the community (Tschannen-Moran & Hoy, 1998).

2.4. Social Cognitive Theory and Self-Efficacy

In this section, social cognitive theory and self-efficacy beliefs as regards development of self-efficacy, influence of self-efficacy belief on human functioning, sources of self-efficacy, and related views of personal efficacy are presented in detailed.

2.4.1. Social Cognitive Theory

Social cognitive theory advanced by Bandura (1997; 2001) is a view of human functioning that focuses on human agency and corresponds to a dynamic interaction between personal, behavioral and social factors in human adaptation and change. In essence, social cognitive theory covers human thought and motivation (Bandura, 1989). According to Pajares (2002b), the social cognitive theory of Bandura is different from all other behaviorist theories emphasizing that the product of environmental factors is human change. Pajares (2002b) stated that since human thoughts have an influence on behaviors, human change cannot be limited to the impact of an external stimulus, unlike to behaviorist point of view. In fact, Pajares also specified that behaviorist theories focus on the effects of biological factors on human development and adaptation rather that taking into account social and contextual influences. However, Bandura's social cognitive theory stresses human agency and environmental influence in conceptualizing human change and adaptation (Bandura, 1997).

Main source of social cognitive theory is human agency in which individuals are considered as proactive agents who are "are contributors to their life circumstances, not just products of them" (Bandura, 2006, p. 164). This sense of human agency makes individuals who have their own self-beliefs to control over their thoughts, feelings and actions (Bandura, 1986). Due to not being isolated from external environment, individuals are considered as contributors and

products of their own environment and the social systems (Bandura, 2006). In other words, they are the products and producers of their own social systems.

The origin of personal agency can be complicated to understand. However, personal agency development starts with birth. A newborn comes to the world without any personal agency, but subsequently he or she constructs his or her sense of personal agency through interaction with external environmental and taking part in environmental events. In other words, one's personal agency is developed socially (Bandura, 2006).

According to Bandura (1997; 2001; 2006), there are four core features of human agency, which are intentionality, forethought, self-reactiveness and self-reflectiveness. Related to *intentionality*, Bandura (2001) stated that human agency is relevant to the acts of individuals performed intentionally. Human beings can have chance to choose how to behave in an accommodative manner by the exercise of self-influence. Bandura (2001) also stated that an intention is both a prediction of future course of action and proactive commitment causing occurrence of these actions. The second feature of human agency which is *forethought* goes through future-directed planning in the temporal extension of agency (Bandura, 2001). In essence, Bandura (2001; 2006) asserted that individuals set their own goals and predict consequences of their prospective set of actions for producing desired outcomes. In relation to this, Bandura (2001) also stated that "the ability to bring anticipated outcomes to bear on current activities promotes foresightful behavior. It enables people to transcend the dictates of their immediate environment and to shape and regulate the present to fit a desired future" (p. 7). The third core property of human agency is *self-reactiveness* which involves "the ability to construct appropriate courses of action and to motivate and regulate their execution" (Bandura, 2001, p. 165). The last agentic property which is *self-reflectiveness* refers to examining the functioning of individuals and evaluating the soundness of individuals' thinking with judging the correctness of their predictive and operative thoughts (Bandura, 2001; 2006).

In social cognitive theory, individuals are considered as self-organizing, proactive, self-reflecting and self-regulating organisms instead of being reactive living things formed by environmental factors or forced by inner impulses (Bandura, 2006). Depending on this theoretical point of view, activity and processes of human beings are displayed the product of a dynamic interplay of personal, behavioral and environmental events (Bandura, 1997). In other words, interpretation of the results of people's behaviors gives information about people's environment and changes this environment and personal factors that individuals have, in turn, give information about the subsequent behavior or change that behavior (Pajares, 2002b).

This is the base for Bandura's (1986) notion of *reciprocal determinism* (see Figure 2.2). The framework of Bandura (1986; 1997) includes a triadic model of reciprocal determinism which is described by Pajares (1996) as a model including "(a) personal factors in the form of cognition, affect, and biological events; (b) behavior; and (c) environmental influences create interactions that result in a triadic reciprocality" (p. 544). In this multi-directional model, personal factors, behavior and environmental events are interacting with each other. However, Bandura (1997) explained that reciprocal determinism does not imply that all set of determinants are of equal strength. Rather, their influence varies based upon different circumstances and for different activities.

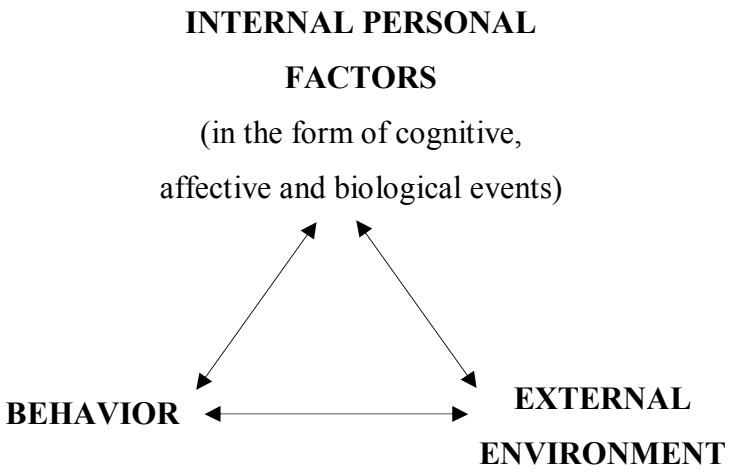

Figure 2.2 Theoretical Model of Triadic Reciprocal Determinism

Source: Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.

2.4.2. Self-Efficacy Beliefs

Of all the mechanisms of personal agency affecting human functioning, belief of personal efficacy is the most central and pervasive one that exercise to control over individuals' functioning and environmental events (Bandura, 1997). According to Bandura (1986), self-efficacy is a major component of social cognitive theory and defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). Bandura (2001) asserted that the foundation of human agency is the sense of efficacy belief and perceived self-efficacy has a crucial importance in the causal structure of social cognitive theory by influencing the way of individuals' thinking with self-enhancing or self-debilitating. In fact, self-efficacy beliefs influence motivation and perseverance of individuals when facing with adversity situations, the quality of emotional life and vulnerability of individuals to stress and depression (Benight & Bandura, 2004).

Pajares (2002b) also propounded his thoughts about sense of efficacy that individuals having high sense of efficacy consider difficult tasks as challenges that have to be overcome with strong commitment instead of seeing them as threats to be refrained. These individuals regain their self-efficacy after failures or obstacles with ascribing the reasons of the failure to inadequate effort or lacking knowledge and skills. As regards affecting thought patterns and emotional reactions of individuals, Pajares (2002b) stated that high self-efficacy helps developing tranquility while dealing with difficult tasks and activities whereas individuals having low sense of efficacy believe in overrating difficulties of the tasks with producing the feelings of anxiety, stress and depression. Therefore, it is obvious that sense of efficacy beliefs affect one's level of accomplishment for a given task. Indeed, increase in performance is achieved by resoluteness in collaboration with high sense of efficacy. Otherwise, giving-in accompanied with low sense of efficacy brings out failure, lower confidence and morale in addition to creation of self fulfilling prophecy (Pajares, 2002b).

Bandura (2006) stated that outcome expectations of people in terms of being favorable or adverse outcomes are shaped with efficacy beliefs and those beliefs settle the appearance of opportunities and obstacles. For example, individuals having low efficacy easily feel the uselessness of their effort in the face of challenge and immediately give up with their efforts. On the other hand, people having high efficacy feel that obstacles and failures can be overcome with the help of self-regulatory skills and permanent effort (Bandura, 2001; 2006). According to Bandura's (2001) point of view, "a strong self of coping efficacy reduces vulnerability to stress and depression in taxing situations and strengthens resilience to adversity" (p. 10).

However, the discrepancy between self-efficacy and action of individuals results from an individual's incorrect perception of task demands and defective self-knowledge (Bandura, 1986). At this point, it is important to emphasize that one's self efficacy is *task* and *situation* specific (Bandura, 1997). In a research

performed by Bandura, Reese and Adams (1982), it was found that as completion of scaffolding tasks increases with being mastery of the issue, the level of perceived self-efficacy increases from non-exist to low, moderate and high levels. That is to say, individuals' level of self-efficacy differs depending on specific situations and the task itself. "For example, one may believe they can play in a recreational softball team, but are not ready for the professional league" (Dorel, 2009, p. 26).

According to Bandura (1997), there are three dimensions of efficacy beliefs; which are *level*, *generality* and *strength*. Firstly, efficacy beliefs of the individuals vary in *level*. Indeed, perceived personal efficacy of different people may be limited to simple task demands or difficult performance demands. Related to level dimension, Bandura (1997) stated that perceived capability of a person can be measured by considering the level of task demands having different degrees of challenge or obstacle to performance. To illustrate, judgments of athletes' belief whether or not jumping over the crossbars at different heights can be accepted as measuring high-jump efficacy. Secondly, efficacy beliefs of individuals vary in *generality*. Individuals may feel themselves depending on performing different kinds of activities or only certain kind of activity. In this sense, Bandura (1997) pointed out that there are various dimensions of generality like degree of similarity of activities, style of capabilities as regards behavioral, cognitive or affective aspects, qualitative property of situations and the individuals' personal traits. In addition to level and generality dimensions, efficacy beliefs also differ in *strength*. Weak efficacy beliefs cause negative results due to invalid experiences while people having tenacious belief in their capabilities will be persistent with their efforts in spite of various difficulties and impediments without being overwhelmed easily (Bandura, 1997).

There has been ample of research generated with regard to self-efficacy in different areas like medicine, athletics, media studies, social and political change, business, psychology and psychiatry (Benight & Bandura, 2004; Gully,

Incalcaterra, Josi & Beaubein, 2002; Holden, 1991; Moritz, Feltz, Fahrbach & Mack, 2000; Pajares, 2002b; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998). Mostly studied research areas in psychology related to self-efficacy are on clinical problems like phobias, moral development, depression, behavior of smoking, confidentiality, and social skills (Pajares, 2002b). On the other hand, there have been plenty of conspicuous studies performed in educational areas like academic achievement, problem solving, goal setting, career development, organizational learning, organizational climate, trait of success and failure, memory, teaching and teacher education, instructional practices (Ashton, 1985; Guskey, 1988; Gibson & Dembo, 1984; Multon, Brown & Lent, 1991; Pajares, 2002b; Tschannen-Moran et al., 1998; Tobin, Muller & Turner, 2006).

2.4.2.1. Development of Self-Efficacy

Bandura (1986) pointed out that belief in one's efficacy does not remain in a stagnant state; it demonstrates variability depending upon experiences and age of the individual. Even though, Bandura (2006) claimed that a baby is born without any personal agency, experiences of children with their physical surrounding by manipulating and familial interactions form initial base for developing sense of efficacy (Bandura, 1986). According to Bandura (1986), as social world of children expands, peer relations shape children's self-knowledge related to their capabilities. During the formative years, school constitutes primary setting for social validation of cognitive efficacy in terms of developing cognitive competencies, problem solving skills and participation to societal activities. As individual enters adolescence, demands of the adulthood increase; therefore, self-efficacy becomes an important motivational contributor for accomplishments. During the middle years, individuals get into established routines which make efficacy perceptions of people stable, but not static, in the main areas of functioning. However, Bandura (1986) stated that individuals are faced with difficulties that limit their capabilities by the middle years. Related to self-efficacy in adulthood, it is asserted that maturity and having experience in course of time

result in self-regulation of individuals' action through expectation of outcomes, improvement of goals, set of standards for behaviors that are approved and reflection of the accomplishments (Pajares 2002a; Zimmerman & Cleary, 2006). As people become advance in age, reappraisal and misappraisal of capabilities comes forward with making efficacy judgments (Bandura, 1986). When people grow older, they began to evaluate their performance accomplishments and compare them to their earlier level of functioning (Mullen & Suls, 1982).

2.4.2.2. Influence of Self-Efficacy Beliefs on Human Functioning

Cognitive, *motivational*, *affective* and *decisional processes* of human functioning are regulated by means of self-efficacy beliefs (Benight & Bandura, 2004). Bandura (1994) contended that sense of efficacy has an influence on *cognitive processes* with emphasizing analytical thinking. In essence, thoughts enhancing self-efficacy underlined in internal actions like setting goals are covered by emphasizing cognitive processes (Bandura, 1993, 1997). To illustrate, individuals having high sense of efficacy have tendency to analyze adverse situations with sense of control and providing more perseverant endeavor (Pajares, 2000). Those people scrutinize their decisions through elaboration without deterring against the failures and obstacles in order to attain their set of goals (Bandura, 1997).

By means of figuring out level of the goal, resoluteness and resilience against failure and obstacles, sense of efficacy influences *motivation* of individuals (Bandura, 1994). In fact, motivational processes point out self-motivation and regulation of the behaviors with great intensity and persistence of effort (Bandura, 1997). For instance, people having high self-efficacy belief have inclination to set higher goal levels compared to people having low sense of efficacy. Accordingly, individuals who have high sense of efficacy belief are persevering against adverse situations and resilient whereas those having low self-efficacy are despair across difficult circumstances and restrict their involvement in the future with similar efforts (Bandura, 1997; Weiner, 1985).

Self-efficacy beliefs influence human functioning in terms of *affective processes* in which regulation of emotional states and stimulation of psychological and emotional reactions have important prominence (Bandura, 1993). Indeed, belief of an individual related to how well he or she can overcome stressful and adverse situations is associated with affective processes (Bandura, 1994). Meanwhile, Pajares (2002b) claimed that people possessing high self-efficacy belief have tendency to increase their performance with strengthening their belief and spirit by coping with stress while individuals who have low self-efficacy are likely to assure failure with lowering their confidence and morale.

One's sense of efficacy has also impact on *selection processes* of human functioning which corresponds to a claim that one having high sense of efficacy in a particular area is more likely to incline the challenges of that area rather than having a tendency to other areas (Bandura, 1994). In essence, Bandura (1993) asserted that mastery of the given tasks enhances resoluteness and optimism of the individual about his or her capability for future task accomplishment. Accordingly, self-, efficacy beliefs influence type of the activities and environment of the individual that they choose (Bandura, 1994). Related to this, Bandura (1994) asserted that people avoid adverse situations which are below their capabilities whereas they undertake difficulties if they feel themselves to be capable of overcoming those difficulties.

2.4.2.3. Sources of Self-Efficacy

Individuals' beliefs about their efficacy are based on four principal sources of information: *enactive mastery experience* which is an indicator for the capability of a person; *vicarious experience* which helps to change efficacy beliefs of individuals by comparison with the achievements of other people; *verbal persuasion* that refers to strengthening people's belief related to their capabilities; and *physiological and affective states* that deal with self judgment of people's capabilities, strength and vulnerability toward adversities (Bandura, 1997).

Of the four sources of efficacy information, *enactive mastery experience*, also called enactive attainment or performance attainment, is the most effective sources of efficacy information due to providing the most influential evidence of whether a person can perform a task whatever it is necessary to succeed (Bandura, 1977; 1986; 1997). If individuals only accomplish easy tasks, they become to anticipate quick results and demoralize by adverse situations and failures (Bandura, 1986; 1997). Mastery experiences change the degree of efficacy by some factors: self-schemata (interpretation of individual's performance), task factors (type of the task in terms of difficulty) and contextual factors (context of the task), effort expenditure (normative information about task difficulty), self-monitoring and reconstruction of experiences (person's attention and selective recall on successful experiences with interpretation of performance), and attainment trajectories (complex skills occurring during a long period of time) (Bandura, 1997; Harackiewicz, Sansone & Manderlink, 1985).

The other source of efficacy information is *vicarious experience* that refers to observing someone else's performance for a given task with modeling the behavior or action of the monitored individual (Bandura, 1997). Indeed, observer compares himself or herself with the monitored individual and intensifies or weakens his or her self efficacy beliefs. That is, if the observer believes that the model performs a task that is familiar to him or her, that individual considers that he or she can also attain the same task due to the similar context of the task and enhance the observer's sense of efficacy beliefs (Bandura, 1997).

Verbal persuasion also known as social persuasion is the other way which increases individuals' sense of efficacy. According to Bandura (1997), verbal persuasion is related to convince of an individual verbally that he or she is capable of fulfilling a specific task. However, if the provided feedback is unrealistic, there is possibility to decrease the efficacy beliefs of the individual. In addition to evaluative feedback given to performers, if the verbal persuasion is obtained by a persuader possessing creditability with being knowledgeable about the activities

and having diagnostic competence through years of experience will be effective for increasing efficacy beliefs (Bandura, 1997). Moreover, Bandura (1997) asserted that social appraisals are more likely to be believable as regards level of the disparity with considering the recipient's beliefs and his or her current capabilities.

Physiological and affective states are related to judgments of individuals about their capabilities depending on somatic information transmitted by physiological and emotional states like physical accomplishment, health functioning and overcoming stressors (Bandura, 1997). Indeed, physiological states like mood, anxiety, stress and fatigue states contribute to information about individual's sense of efficacy beliefs (Pajares, 2002c).

2.4.2.4. Related Views of Personal Efficacy

According to Bandura (1997), there are differences between self-efficacy and self-concept, self-confidence, self-esteem, locus of control and outcome expectations due to being different terms with overlapping characteristics even although they are often used interchangeably as if they represent the same phenomenon (Bandura, 1997; Bong & Skaalvik, 2003).

There is conceptual difference between *self-concept* belief and self-efficacy. Indeed, self-concept is relevant to a generalized self-evaluation including different self-reactions and beliefs like self-worth with being consistent and stable for changes of tasks whereas self-efficacy is the context specific judgment of an individual related to his or her personal capability for a given task (Bandura, 1997; Mone, Baker & Jeffries, 1995; Pajares, 2002c).

Self-efficacy beliefs are different from the other similar concept which is *self-confidence*. In essence, self-confidence refers to the strength of one's belief

himself or herself, but not related to a specific tasks and situations (Benabou & Tirole, 2002).

S*elf-esteem* is another facet of self concept which should be distinguished from self-efficacy belief. In fact, Bandura (1997) asserted that "perceived self-efficacy is concerned with judgments of personal capability; whereas self-esteem is concerned with judgments of self-worth" (p. 11) which refers to the evaluation of self-worth depending on "how the culture values the attributes one possesses and how well one's behavior matches the standards of worthiness" (Bandura, 1986, p. 410). In addition, perceived personal efficacy predicts the goals of the individuals with performance attainments while self-esteem is not predictive of personal goals, performance or outcomes (Mone et al., 1995).

The concept of *locus of control* is also different from self-efficacy which pertains to a general expectancy that outcomes are regulated by belief of the individual or by external factors (Rotter, 1966). "This dualistic view of control suggests that an internal locus of control promotes self-directed behavior, whereas external locus of control inhibits one's agentic abilities" (Zimmerman & Cleary, 2006, p. 50). On the other hand, locus of control and self-efficacy has similarities since they both emphasize the agentic ways of individuals' actions with respect to environmental events (Bandura, 1986; 1997).

Outcome expectations are also different from self-efficacy beliefs since Bandura (1997) stated that "perceived self-efficacy is a judgment of one's ability to organize and execute given types of performances, whereas an outcome expectation is a judgment of the likely consequence such performances will produce" (p. 21). As indicated in Figure 2.3, outcome expectations for a given course of action take three major forms that are positive or negative physical, social and self-evaluation effects whereas efficacy beliefs vary in level, strength and generality (Bandura, 1997). To illustrate, pleasant sensory experiences and physical pleasures are in the positive forms whereas deterrent sensory

experiences, pain and physical discomfort can be considered as negative forms. Moreover, behavior of the individuals is controlled by social reactions of others in the expressions of interest, approval, power, social recognition or disinterest, disapproval, social rejection and imposed penalties. Besides, self-evaluative forms of outcome expectancies are self-satisfaction and sense of pride or self-dissatisfaction, self-devaluation and self-censure (Bandura, 1997).

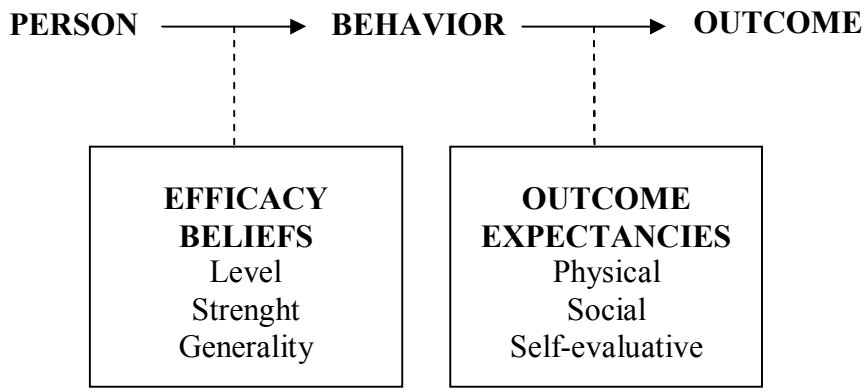

Figure 2.3 The Conditional Relationships between Efficacy Beliefs and Outcome Expectancies

Source: Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.

2.5. Teachers' Sense of Efficacy and Its Foundations

The concept of teacher efficacy was first conceived thirty four years ago, considering the work of Rotter (1966) as a theoretical basis, by RAND Cooperation's studies (Armor et al., 1976; Berman, McLaughlin, Bass, Pauly & Zellman, 1977). The main premise of this school of thought is that teachers could regulate reinforcement of their actions like student motivation and performance by themselves or by the environment. Additionally, the second conceptual framework, the work of Bandura (1977) became forward in which teacher efficacy concept is recognized as a type of self-efficacy that individuals construct

their beliefs considering their capabilities in order to reach an accomplishment. With the light of those theoretical frames, teacher efficacy is defined as "the extent to which the teacher believes he or she has the capacity to affect student performance" (Berman et al., 1977, p. 137, cited in Tschannen-Moran et al., 1998, p. 202), "teachers' belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated" (Guskey & Passaro, 1994, p. 4, cited in Tschannen-Moran et al., 1998, p. 202) or as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran et al., 1998, p. 233).

The body of research done related to teacher efficacy with analyzing the connections of this concept to psychological frames of Rotter's and Bandura's work (Tschannen-Moran et al., 1998).

2.5.1. Rotter's Theory of Locus of Control (1966) and RAND Studies (1976)

Rotter's (1966) concept of locus of control gave rise to studies of teacher efficacy with anchoring the concept of locus of control, in which teachers' sense of accountability in the classes are assessed by considering that internal and external factors contribute to accomplishment or failures. In 1966, Rotter developed the *Internal-External Locus of Control (I-E) Scale* and it was found that teachers' skills and efforts lead to teachers' success or failure with their internal sense of control. That is, expected outcomes are achieved by their responsibility. On the other hand, if the teachers feel that external factors influence themselves, teaching outcomes and learning become beyond their control, instead they are generated by fate, accident, or luck, teachers feel less effective in the classroom and teachers' effort have little influence on students' performance and on teaching progress (Rose & Medway, 1981; Rotter, 1975; Tschannen-Moran & Woolfolk Hoy, 2001; Woolfolk & Hoy, 1990).

Depending on Rotter's social learning theory, the first studies of teacher efficacy conducted by RAND Cooperation, in which teacher efficacy is asserted to be based on teachers' beliefs related to their control over students' achievement (Armor et al., 1976; Berman et al., 1977) and it was found that there is a strong positive effect of teachers' sense of efficacy on student performance, attainment of project goals and the use of project methods and materials.

After the success of RAND studies, many researchers conducted studies to broaden and clarify the concept of teacher efficacy. Tschannen-Moran et al. (1998) also stated that some research related to teacher efficacy had proceeded by using Rotter's theory in order to enhance the control of internal and external reinforcements on teachers' beliefs. They noted that correlates of teacher efficacy, when this perspective is considered, comprises student achievement (Armor et al., 1976; Ashton, 1985; Ashton & Webb, 1986; Berman et al., 1977), teacher stress (Greenwood, Olejnik & Parkay, 1990; Parkay, Greenwood, Olejnik & Proller, 1988), willingness of the teachers to implement innovations (Berman et al., 1977; Guskey, 1984; Smylie, 1988), and their willingness to continue in the field (Glickman & Tamashiro, 1982).

2.5.2. Rotter and RAND Influence

Based of Rotter's theory and RAND studies, Rose and Medway (1981) developed *Teacher Locus of Control (TLC) Scale* in order to assess teachers' perceptions related to students' success and failure as regards internal and external control. Indeed, TLC Scale was found to predict teachers' behaviors compared to Rotter's I-E Scale. Rose and Medway (1981) were found that teachers having internal control have tendency to perform improved educational practices like willingness to perform new instructional techniques than teachers having external control and teachers' locus of control is related to student learning and achievement.

In the same year when Rose and Medway developed the TLC, Guskey (1981) developed *Responsibility for Student Achievement (RSA) Scale* which measured teachers' beliefs in terms of accountability and student achievement with assuming responsibility for student success and for student failure outcomes. Results revealed that teachers' higher level of efficacy is associated with more positive attitudes related to teaching in addition to greater confidence in teaching abilities of teachers (Guskey, 1984). With the same scale, it was also found that teachers exhibit high efficacy when student outcomes are positive rather than when results are negative (Guskey, 1987).

Webb and his colleagues tried expand the reliability of RAND efficacy questions by developing *Webb Efficacy Scale* (Ashton, Olejnik, Crocker & McAuliffe, 1982) in order to measure teacher efficacy at about the same time when RSA and TLC developed (Tschannen-Moran et al., 1998).

2.5.3. Bandura's Social Cognitive Theory Influence (1977)

After Bandura emphasized the construct of self-efficacy and proposed social cognitive theory in 1977, many studies have been conducted by drawing on Rotter's and Bandura's conceptualizations (Tschannen-Moran & Woolfolk Hoy, 2001).

Ashton and her colleagues (Ashton, Buhr & Crocker, 1984) developed *Ashton Vignettes* consisting of vignettes describing situations a teacher may face with and asked to judge their effectiveness while dealing with those situations in order to clarify the assumption that teacher efficacy is context specific; however, they found that stress was no a proxy for efficacy.

In the early 1980s, Gibson and Dembo developed the *Teacher Efficacy Scale (TES)* based on RAND studies and Bandura's conceptual frame (Tschannen-Moran & Woolfolk Hoy, 2001). Gibson and Dembo (1984) measured personal

teaching efficacy and general teaching efficacy of teachers by TES and it was found that teachers having greater self-efficacy spend more time on instructional activities and perform more commitment for demanding students compared to teachers having low sense of efficacy. Much more studies performed related to teachers' self-efficacy within particular curriculum areas by the help of subject-matter-specific modifications of TES (Tschannen-Moran & Woolfolk Hoy, 2001). Riggs and Enochs (1990) developed the *Science Teaching Efficacy Belief Instrument (STEBI)* to measure elementary school science teaching efficacy; then this scale was modified in order to assess secondary school science teaching efficacy and pre-service teacher efficacy (Ross, 1994), Emmer (1990) attempted to extend the TES to understand teachers' efficacy for classroom management, Coladarci and Breton (1997) modified the TES by rewording for special education, and Meijner and Foster (1988) developed the *Dutch teacher self-efficacy scales* in order to apply the instrument in the context of special education. Apart from those modifications, Guskey and Passaro (1994) brought different viewpoint to Gibson and Dembo's TES with rewording of the TES items and claiming that TES measures only personal teaching efficacy which comprises internal factors, not consider the influence of external factors. With rewording of TES, Guskey and Passaro emphasized their reworded scale was based on two factors that internal factor composes "perceptions of personal influence, power, and impact in teaching and learning situations" (Guskey & Passaro, 1994, p. 639, cited in Tschannen-Moran et al., 1998, p. 224) while external factor presents "perceptions of the influence, power, and impact of elements that lie outside the classroom and, hence, may be beyond the direct control of individual teachers" (Guskey & Passaro, 1994, p. 639, cited in Tschannen-Moran et al. , 1998, p. 224).

While researchers were questioning which scale best measures teacher efficacy, Bandura introduced his unpublished measure, named as *Bandura's Teacher Self-Efficacy Scale,* which examines seven subscales with a multifaceted view of teaching and efficacy; "efficacy to influence decision making, efficacy to influence school resources, instructional efficacy, disciplinary efficacy, efficacy to

enlist parental involvement, efficacy to enlist community involvement, and efficacy to create a positive school climate" (Tschannen-Moran & Woolfolk Hoy, 2001, p. 791). Bandura (1997) asserted that strength of teachers' efficacy beliefs against obstacles point out level of task demands. However, this scale was criticized due to not having available reliability and validity data (Tschannen-Moran & Woolfolk Hoy, 2001).

In order to surmount conceptual confusions of Rotter's locus of control theory and Bandura's social cognitive theory as stated in Gibson and Dembo (1984) and elicit coherence to the meaning of teacher efficacy, Tschannen-Moran et al. (1998) proposed a new integrated model. The new model is suggested to deal with earlier conceptual frames and provide new areas for research as presented in Figure 2.4 (Tschannen-Moran et al., 1998).

As can be seen from Figure 2.4, the new integrated model comprises Bandura's self-efficacy theory (1997) as regards involving sources of efficacy information (mastery experience, physiological arousal, vicarious experience, and verbal persuasion), cognitive processing, analysis of teaching task and assessment of personal teaching competence, consequences of teacher efficacy and performance (Tschannen-Moran et al., 1998). According to Tschannen-Moran et al. (1998), since teacher efficacy is believed to be context specific and "teachers feel efficacious for teaching particular subjects to certain students in specific settings, and they can be expected to feel more or less efficacious under different circumstances" (p. 227), teaching task and the context of it should be taken into account with considering the individual's strength and weaknesses.

Related to the cyclic nature of the model elicit teacher efficacy, Tschannen-Moran et al. (1998) indicated that a new mastery of experiences is generated by the proficiency of a performance. Having proficiency of a performance provides information which will be treated as the shaping of future efficacy beliefs. As the efficacy increases, it results in greater effort and continuity. As effort and

continuity increase, in turn, better performance is achieved with greater efficacy. The reverse of the processes are also attained. Indeed, lower level of efficacy results in less effort and conceding easily, in turn, lower levels of efficacy is produced with poor teaching outcomes.

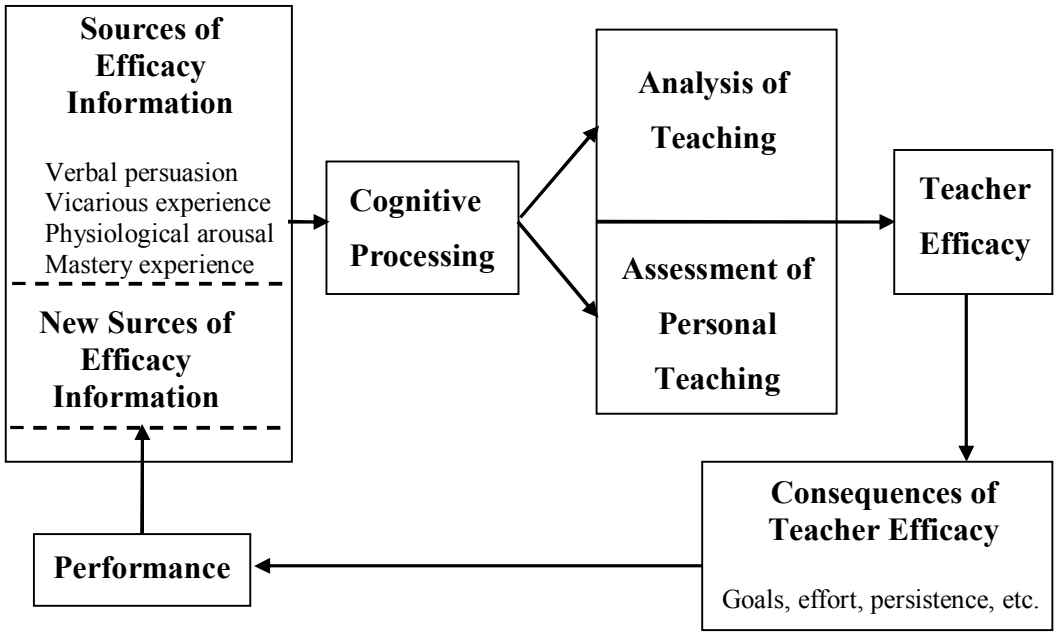

Figure 2.4 The Cyclical Nature of Teacher Efficacy

Source: Tschannen-Moran, M., Woolfolk Hoy. A. W., & Hoy, W. H. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, *2*, 202-248.

In essence, this new model is asserted that it focuses on two dimensions of teacher efficacy; *teaching task and its context* and s*elf-perceptions of teaching competence* and is conceived within two factors, general teaching efficacy and personal teaching efficacy (Tschannen-Moran et al., 1998). As regards teaching task and its context, factors that make teaching difficult are associated with general teaching efficacy. As regards self-perceptions of teaching competence, judgments of one's personal capabilities like skills, knowledge and personality traits are associated with personal teaching efficacy (Tschannen-Moran et al., 1998).

In relation to measurement of teacher efficacy, Bandura (1997) stated that teachers' sense of efficacy should be linked to different domains of knowledge because teachers' perceived efficacy is more than dealing with subject matter. Taking these points into consideration, Tschannen-Moran and Woolfolk Hoy (2001) developed the *Teachers' Sense of Efficacy Scale (TSES)*, originally referred as *Ohio State Teacher Self-Efficacy Scale (OSTES)*, which is based on the integrated model of teacher efficacy proposed by Tschannen-Moran et al. (1998). This instrument was developed to measure teacher efficacy in three domains: efficacy for student engagement, efficacy for classroom management, and efficacy for instructional strategies (Tschannen-Moran & Woolfolk Hoy, 2001). OSTES is believed to be a valid and promising tool compared to other instruments for providing elusive construct in terms of teacher efficacy (Tschannen-Moran & Woolfolk Hoy, 2001).

2.5.4. Correlates of Teacher Efficacy

There are various studies investigating the correlates of teacher efficacy with a variety of efficacy scales and measurements. More specifically, student outcomes, teacher behaviors, instructional practices, classroom management and school context constructs are highlighted by exploring the relationship between teachers' sense of efficacy (Anderson, Greene & Loewen, 1988; Armor et al., 1976; Ashton & Webb, 1986; Berman et al., 1977; Guskey, 1987; Ross, 1994; Schriver, 1993; Stein & Wang, 1988; Tschannen-Moran & Woolfolk Hoy, 2001, 2007; Woolfolk & Hoy, 1990). These dimensions concerning correlates of teacher efficacy are discussed below in detail.

2.5.4.1. Effects of Student Outcomes, Teacher Behaviors, and Instructional Practices on Teacher Efficacy

In the literature, evidence related to student outcomes and teacher efficacy revealed that teacher efficacy beliefs positively affect student achievement in

reading (Armor et al., 1976). Berman et al. (1977) found out that teacher efficacy and student achievement are positively related to each other. Ashton and Webb (1986) reached such positive relationship in the basic-skills of math and language while Anderson et al. (1998) and Ross (1994) found such relationship in reading language arts and social studies.

Demographic characteristics of the teacher also have influence on teacher efficacy. In essence, it was found that personal efficacy of female teachers is higher than males, except for male science teachers (1994). However, Tschannen-Moran and Woolfolk Hoy (2007) asserted that demographic characteristic of teacher is not a main predictor of teacher efficacy. Rather, the authors implied that the school level is an important predictor of teacher efficacy. In their study they found that teachers working in elementary schools are more efficacious than teachers working in middle or high schools. In addition, teaching experience is correlated with teaching efficacy. In fact, experienced teachers are found to have efficacy due to possessing successful teaching strategies (Tschannen-Moran & Woolfolk Hoy, 2007). Further, evidence indicated that knowledge in the content related to teaching field is an important predictor of professional efficacy (Schriver, 1993). In several studies, it was found that teachers having higher efficacy implement new strategies and curriculum, and prefer professional training compared to other teachers (Guskey, 1987; Stein & Wang, 1988). As regards classroom management, teacher possessing low sense of efficacy are found to have less progressive style in the classroom like having tendency to be more rigid in the class and controlling classrooms (Woolfolk & Hoy, 1990), also criticizing or disregarding students who answer the directed questions incorrectly (Gibson & Dembo, 1984).

2.5.4.2. Effects of School Context on Teacher Efficacy

According to Bandura's social cognitive theory (1986, 1997), there is an interaction and influence between behavior and personal factors in the form of

cognitive, affective and biological events, and the external environment within the reciprocal determinism. When Bandura's (1997) claims are considered, efficacious schools comprise some characteristics like high expectations for student success, accelerated learning environments for struggling students, positive classroom management, parental involvement and cooperatively monitoring of academic activities. Therefore, it is necessary to point out school context as environment and teacher efficacy beliefs as personal factors in order to understand the reciprocal association in school organizations (Tschannen-Moran et al., 1998). Organizational structure and climate of the school, principal leadership and collective efficacy are considered as school context effects (Tschannen-Moran et al., 1998).

Student of Class Effects. In order to investigate the continuity of teacher efficacy for different class periods during a day, RAND measure of personal teaching efficacy distributed to secondary teachers for each classes (Raudenbush, Rowen & Cheong, 1992; Ross, Cousins & Gadalla, 1996). The results of these studies revealed that subject matter and class of students with whom teachers studied for each period affect the level of personal teaching efficacy of teachers. Teachers were seen less efficacious in nonacademic classes compared to academic and honor classes (Raudenbush et al., 1992). As a result, it can be concluded that personal teaching efficacy is context specific construct rather than being a generalized expectancy (Tschannen-Moran et al., 1998).

School-Level Effects. As Tschannen-Moran et al. (1998) stated that teachers' sense of efficacy has association with school-level variables like "climate of the school, behavior of the principal, sense of school community, and decision making structures" (p.220). Teachers having personal teaching efficacy and general teaching efficacy are found perceiving positive school atmosphere (Moore & Esselman, 1992). Similarly, in another study performed by Lee, Dedick and Smith (1991), it was revealed that sense of school's community is the most important predictor for teachers' level of efficacy. As regards the behavior of the

principal, the leadership style of the principle is also related to teacher efficacy (Tschannen-Moran et al., 1998). More specifically, when principals contribute resources for teachers and protect them from disruptive factors with giving them opportunity to be flexible in classroom relations is found to create an environment to enhance teachers' sense of efficacy (Hoy & Woolfolk, 1993). Moreover, it was asserted that if student disorder is maintained in minimum level, teachers of the school feel more sense of efficacy (Lee et al., 1991). Likewise, it was stated that if the principle of the school performs proper behaviors with contributing rewards depending on the performance, teachers' personal teaching efficacy and general teaching efficacy are found higher (Hipp & Bredeson, 1995). In the same study, it was revealed that principals' creativity of a common sense of purpose among teachers is related to higher general teaching efficacy. In addition to these, teachers' participation to decision making processes also affect teachers' sense of efficacy (Tschannen-Moran et al., 1998). Specifically, it was stated that when the teachers in an urban place have freedom to make decisions related to their classrooms, their general teaching efficacy become higher. On the other hand, if teachers believe that they participate in school's decision making processes and feel fewer obstacles for teaching, they are found to have strong sense of personal teaching efficacy (Moore & Esselman, 1992).

According to Rosenholtz's (1989) study, "receiving positive feedback on teacher performance, collaboration with other teachers, parental involvement in the school, and schoolwide coordination of student behavior" (cited in Tschannen-Moran et al., 1998, p. 221) are found as other school factors affecting teachers' sense of efficacy. Further, Ashton and Webb (1986) contended that structure of the school as being middle school or junior high school also affect teachers' sense of efficacy. In essence, teachers working at middle school have higher sense of efficacy due to having greater expectations about academic success of students compared to teachers working at junior high schools. In another study, Webb and Ashton (1987) revealed that some factors behind the lower teacher efficacy are

"excessive role demands, poor morale, inadequate salaries, low status and lack of recognition" (cited in Tschannen-Moran et al., 1998, p. 221).

Collective Efficacy Effects. Collective efficacy at the school level refers to "the extent to which perceptions of efficacy, either high or low, are shared across teachers in a school building" (Tschannen-Moran et al., 1998, p. 221). In fact, schools where teachers work with collaboration for providing learning, motivation and problems of students develop teachers' sense of efficacy (Tschannen-Moran et al., 1998). If the teachers' collective beliefs in terms of instructional efficacy become stronger, the performance of the school strengthened academically (Bandura, 1993). Similarly, if principal perform strong leadership with supporting innovation (Fuller & Izu, 1986) and deal with the concerns of teachers (Newmann, Rutter & Smith, 1989), teachers' sense of collective efficacy become greater. Hence, higher teacher efficacy is found to be correlated with the strength of the collective efficacy (Goddard & Goddard, 2001; Newmann et al., 1989; Tschannen-Moran et al., 1998).

2.6. Relationship between Teachers' Sense of Efficacy and Openness to Change

Even though there is no research done directly investigating the relationship between teachers' sense of efficacy and openness to change, scrutinizing the relationship between teachers' sense of efficacy with school context effects and individual factors affecting attitudes towards change inspire the arousal of priori association between those variables.

When the influence between personal factors and the external environment within reciprocal determinism in social cognitive theory is considered to be associated with each other, school context effects such as organizational structure, participation of teachers in decision making processes, climate of the school, principals' leadership style with supporting innovation and collective efficacy are

found to be related with teachers' sense of efficacy. Further, schools' community and positive school atmosphere are revealed as the most important predictors for teachers' level of efficacy in the literature. That is, teacher efficacy is concluded to be related with organizational health of the school. As being another school context effect, teachers' perceived openness to change in schools may also be related to their sense of efficacy. However, there is no study performed directly concerning teachers' sense of efficacy and openness to change as perceived by the teachers within the literature.

On the other hand, attitudes towards change are revealed to be related with personality characteristics. Specifically, resilient personality of the person as regards having high levels of self-esteem, optimism and perceived control is found to be associated with higher levels of openness to change in organizations. Likewise, individuals' ability to control over the environment which refers to internal locus of control is also asserted to be one of the predictors of openness to change. That is to say, attitudes towards change are influenced by personal factors. When school setting is taken into account, the level of teachers' sense of efficacy may be related to faculty's and principals' openness to change as perceived by the teachers. In essence, perceived openness to change as being one of the positive attitudes towards change with respect to personality disposition may have influence in educational organizations. Nevertheless, there is not much study done in schools concerning openness to change that is directly related to one of the most important individual difference factors which is teachers' sense of efficacy.

Based on previously done studies, when teachers are faced with new teaching environment like a new curriculum, instructional technology or configuration of the school staff, they endeavor to handle the changing educational environment depending on their past achievements and vicarious experiences. At this point, it can be specified that teachers who are certain about their abilities such as being competent enough to manage change facilities perform well in educational

settings. Indeed, teachers who have high levels of efficacy may have impact on school organizations' overall health and progress.

Due to the fact that there is a negligence exploring the relationship between teachers' sense of efficacy and environmental factors in school context and a gap in the literature investigating the relationship between openness to change and personality characteristics, the significance of this study is two folded. Thus, this research seeks to add to the organizational change literature by providing additional insights into openness to change in schools and teachers' sense of efficacy.

2.7. Summary of the Literature Review

This literature review has presented information by focusing on teachers' sense of efficacy and teachers' perceived openness to change in schools by considering teachers and principals. Due to innovations and alterations in internal and external environments of the schools in political, economical, social and technological aspects, teachers in the schools are expected to keep accompany the changing events with their competences in student engagement, instructional strategies and classroom management. While the process of change facilities goes on, teachers, principal, students and parents are affected by the changing climate of educational organizations. Therefore, perceptions of teachers are necessary to taken into account as regards psychological factors affecting change and directing individual toward change. Thus, the literature attempts to correlate teachers' sense of efficacy and perceived openness to change in schools.

The literature reflects comprehensive understanding of openness to change with respect to its antecedents and outcomes. Specifically, this review has yielded predictors of openness to change such as individual-differences, content-based, contextual and process factors as well as providing information about outcomes of openness to change that are related to work place. Besides, this review has

addressed openness to change in school setting by emphasizing faculty openness to change, principal openness to change and community pressure for change in schools. Furthermore, this review has provided information about self-efficacy and the theory behind this concept which is social cognitive theory. Indeed, development of self-efficacy, influence of self-efficacy belief on human functioning, sources of self-efficacy and related views of personal efficacy are covered in this review. Further, this review of literature has highlighted the foundations of teachers' sense of efficacy by pointing out the influence of Rotter's theory of locus of control, RAND studies and Bandura's social cognitive theory. In addition, correlates of teacher efficacy with student outcomes, teacher behaviors, instructional practices and school context effects are stressed for better understanding of teachers' sense of efficacy.

Even though, so many attempts have made in educational organizations in terms of change during the years, most of them failed rather than achieving implementation of change initiatives. While the process of change facilities goes on, teachers, principal, students and parents are affected by the changing climate of educational organizations. Therefore, perceptions of teachers are necessary to taken into account as regards psychological factors affecting change and directing individual toward change. However, there is no research that provides a study of the association between teachers' sense of efficacy and perceived openness to change in school settings. Hence, the aim of the study is to explore the relationship between perceived openness to change as being a school context within a school environment and teachers' sense of efficacy as a personal factor.

CHAPTER 3

METHOD

This chapter introduces method of this study with emphasizing the utilized research design. Presentation of the research question, description of the variables employed in the study, detailed description of population and sampling procedure are followed by the overall research design of the study. Further, description of the instruments used in the study, data collection procedure, data analysis and limitations are reported in this chapter.

3.1. Overall Research Design

This study is an associational study and it was designed as a correlational study, a quantitative research method. Quantitative research is effective in discovering the existing facts and contributing to statistical truth in the research (Smith, 1983; Soltis, 1990). Hence, these kinds of research methods best suit the aim of this study because this study aims finding out a relationship between two quantitative variables. Besides, quantitative research enables collection of data from a large number cases and generalizations from these cases to a population (Soltis, 1990). In this study, a data set was collected from a large sample of teachers, presents exact facts objectively without researcher's value judgments and provides opportunity for generalization of the results.

In order to investigate the relationship between teachers' sense of efficacy and their perceived openness to change, correlational research design was used as a quantitative research design. Since correlational research investigates the association among two or more quantitative variables without manipulation of the variables, correlational research design suits for the purpose of the study. As

correlational research design provides opportunity to analyze relationships among large number of variables in a single study with presenting correlation coefficient to measure the degree and direction of the relationship (Fraenkel & Wallen, 2006), the current study applied a quantitative design to investigate correlations among the variables stated below.

3.2. Research Question

The research question investigated for this study is presented in the following:

- Is there any significant relationship between teachers' sense of efficacy (in student engagement, instructional strategies, and classroom management) and perceived openness to change (at faculty and principal levels, and community pressure for change)?

3.3. Description of the Variables

The variables investigated in the study are presented below with their operational definitions:

Openness to Change: This is the continuous dependent variable of the study and measured by Faculty Change Orientation Scale (FCOS) within three dimensions. The instrument comprises 19 items with 6-point-likert scale ranging from strongly disagree (1) to strongly agree (6) and measures perceptions of teachers about openness to change in their schools. However, after conducting Exploratory Factor Analysis (EFA), described in detail in pilot study part of the study, the new version of the scale also measured three dimensions with including 13 items. Six of the items were extracted from the scale depending on the analysis results in pilot study of the research. An interval level of measurement is utilized for this variable. The scale provides the computation of the individual teacher score for each of the subscales and faculty score for each dimension. The higher the score exhibits the greater extent of openness to change.

Faculty Openness to Change: This variable is a continuous dependent variable pointing out teachers' perceptions about their receptivity to varying degrees of internal and external changes. Faculty openness to change aspect is measured through 9 items in the original scale; however, in this study this dimension is measured by 6 items on the basis of EFA results with extracting 3 items. Therefore, the score of the participant can range from 6 to 36. The higher the score means the greater extent of faculty openness to change. Yet, one of the items in this dimension is reverse structured.

Principal Openness to Change: This variable is also a dependent continuous variable of the study. It indicates perceptions of teachers related to the willingness of the principal welcoming change strategies. This aspect is measured by 6 items in the original FCOS; however, in this study, based on the result of EFA, this dimension covers 4 items. Thus, the minimum score of the participant can be 4 while maximum score can be 24. Nevertheless, all of the items taking place in this dimension are reverse structure items.

Community Pressure for Change: This continuous and dependent variable presents the willingness of the internal stakeholders in the face of external changes. It is measured by 4 items in the original scale; however, in this research 1 item was excluded from the instrument on the basis of exploratory factor analysis results. Therefore, the score of the participant can range from 3 to 18.

Teachers' Sense of Efficacy: This variable is the independent and continuous variable of the study and measured by Turkish version of the Teachers' Sense of Efficacy Scale (TTSES) within three dimensions. The instrument includes 24 items with 9-point-likert scale ranging from nothing (1) to a great deal (9) and measures teachers' beliefs about themselves concerning their capabilities to arrange and perform actions for successful specific teacher tasks. An interval level of measurement is utilized for this variable. The higher the score represents the greater extent of teachers' sense of efficacy.

Efficacy in Student Engagement: This variable is a continuous and independent variable that points out extent to which students are helped and motivated by the teachers to improve their understanding and foster their creativity. This dimension is measured by 8 items in the scale. Hence, the minimum score of the participant for this aspect can be 8 while maximum score can be 72.

Efficacy in Instructional Strategies: This variable is another continuous independent variable of the study indicating extent to which teachers use various assessment techniques, alternative strategies and contribute to appropriate challenges in the classrooms. This aspect is measured by 8 items in TTSES. The score of the participant can range from 8 to 72 and the higher the score represents the greater extent of teacher efficacy in instructional strategies.

Efficacy in Classroom Management: This variable is still another continuous dependent variable of the study which shows extent to which teachers control disruptive behaviors of students and set up a classroom management system with some routines in the class. Teacher efficacy in classroom management aspect is measured through 8 items in the scale. Therefore, the score of the participant can range from 8 to 72.

3.4. Population and Sample Selection

Cluster random sampling was utilized as the sampling method of this study. Considering the data presented by Ministry of National Education, total number of public primary schools in Ankara region comprises 552 schools while total number of public secondary level schools in Ankara region includes 227 schools in various types (MONE, 2010). Since the population of the public primary and secondary level schools in Ankara is large, it is not feasible to select a sample of individuals randomly from this size of population; therefore, the use of random sampling is not applicable for the study. Particularly, cluster random sampling is a

suitable sampling method for the study due to the fact that cluster sampling addresses for a larger number of clusters.

Due to the fact that cluster sampling can be used when random sampling is difficult to implement, easier to perform when the subjects are distributed into large number of clusters (Fraenkel & Wallen, 2006). Hence, cluster sampling is a suitable method for as a sampling method of this research. In order to utilize cluster sampling as a sampling selection in this study, four school districts in Ankara region were firstly selected (viz. Altındağ, Çankaya, Keçiören and Yenimahalle). Then, 61 public primary and secondary level schools were randomly selected from these districts in Ankara through cluster sampling procedure. Consequently, teachers from four districts encompassing 61 public primary and secondary level schools provided the overall sample of the study.

Selected schools from four districts in the sample are grouped according to student size, teacher size, school level and school type. Of the data, it can be concluded that majority of the schools have student number within the range of 1001 to 2000 with comprising 50.9% of the sample. The mean value for the student number in the participant schools was 1593.7 and the student size within these schools ranged from 525 to 3000. The teacher size of the participant schools had differences within the selected sample. Specifically, as can be seen from Table 3.1, 62.3% of the schools' teacher number ranged from 51 to 100, 15.4% of the schools was consisted of teacher size that have a range between 1 and 50, and 12.7% of the schools' teacher number was higher than 151. The mean value for the teacher number in the selected schools was 90.5.

Of the gathered data from the selected public primary and secondary schools, the majority of the data was collected from public secondary level schools from the four districts with 64.3% while the rest of the data was gathered from public primary schools with 35.7%. In order to increase the representativeness of the selected sample for generalizability of the results, five various school types were

included in public secondary level school types. Indeed, as presented in Table 3.1, 21.4% of the public secondary level schools were Anatolian high schools, 17.4% of the schools were regular high schools, 15.4% of them were technical-vocational high schools while 7.2% of the public secondary level schools were industrial-vocational high schools and the rest 2.9% of them were Anatolian & regular high schools.

Table 3.1

Characteristics of the Selected Schools with the Number of Data Gathered

Variables	*Frequency*	*Percent (%)*	*M*	*SD*	*Min*	*Max*
Student Size						
1-1000	143	25.9	1593.7	726.8	525	3000
1001-2000	281	50.9				
2000>	128	23.2				
Teacher Size						
1-50	85	15.4	90.5	44.6	43	200
51-100	344	62.3				
101-150	53	9.6				
150>	70	12.7				
School Level						
Primary	197	35.7				
Secondary	353	64.3				
Secondary School Type						
Regular HS	96	17.4				
Anatolian HS	118	21.4				
Industrial –Vocational HS	40	7.2				
Technical-Vocational HS	85	15.4				
Regular & Anatolian HS	16	2.9				

Target population of the study is all the primary and secondary level public school teachers working at four selected school districts in Ankara region. Nevertheless, accessible population of this research is the teachers working at these selected public primary and secondary level schools. Total amount of teachers working at these schools is 5009; however, the researcher could reach only 552 of them. Since 16 surveys were incompletely filled by the participants, these surveys were eliminated from the analysis. As a result, 11.34% of the accessible population of teachers from selected schools filled the distributed surveys whereas 11.02% of the population comprises the sample of this research.

3.5. Data Collection Instruments

The data of the study were collected by using two previously developed and adapted instruments; Faculty Change Orientation Scale (FCOS) developed by Smith and Hoy (2007) and Teachers' Sense of Efficacy Scale (TSES) developed by Tschannen-Moran and WoolfoIk-Hoy (2001) (See Appendix C and D). The surveys used in this study included measures with multiple Likert-type items, anchored by a six-point (FCOS) and nine-point scales (TSES). The items in the surveys sought to measure teacher perceptions associated with their sense of efficacy and openness to change in schools.

Required permissions were taken from developers of the instruments before implementation of the scales. Specifically, consents of Smith and Hoy, developers of Faculty Change Orientation Scale, were taken in order to utilize their instrument in the study. Besides, Tschannen-Moran and Woolfolk Hoy were contacted to get their permission for the use of Teachers' Sense of Efficacy Scale. Furthermore, required consent was also taken from Çapa to utilize the Turkish version of the Teachers' Sense of Efficacy Scale. Indeed, contacts with developers of the scales were established through e-mail.

A demographic questionnaire designed by the researcher was utilized to gain relevant personal and job specific information of each subject. The demographic questionnaire was comprised of questions pertaining to age, gender, marital status, type of the school, years of experience in teacher position, current job title, subject specialty, number of students in the school (school size), number of teachers in the school, whether teachers performed administrative experiences, whether teachers attended in-service training and whether teachers participated in organizational change project (See Appendix B).

3.5.1. Faculty Change Orientation Scale (FCOS)

One of the variables of the study, which is teachers' perceived openness to change, was measured using the Faculty Change Orientation Scale (FCOS) that was developed by Smith and Hoy (2007). The FCOS is a 19-item measure comprising three subscales, which are Faculty Openness to Change, Principal Openness to Change and Community Pressure for Change. The instrument consists of some negatively phrased statements. The mixture of positive and negative statements requires a close examination of the scores. The FCOS utilizes a Likert-type scale ranging from strongly disagree (1) to strongly agree (6). In other words, the scale is answered based on a range from: strongly disagree (1), disagree (2), somewhat disagree (3), somewhat agree (4), agree (5) and strongly agree (6). In the FCOS instrument, participants were asked to describe their level of perceived openness to change from strongly disagree to strongly agree and the scoring of the each dimension depends on the sum of the scores for each subscale by considering reverse items and dividing by the number of items. The higher the score the greater the extent of openness to change or the greater the community pressure for change. The FCOS instrument consisting of three dimensions has high alpha levels in the original scale: Faculty Openness to Change (α = .95), Principal Openness to Change (α = .87) and Community Pressure for Change (α = .87). High alpha levels present high internal consistency reliability of the instrument.

Since FCOS instrument is a newly developed instrument in literature, adaptation of the FCOS instrument into Turkish for the study was performed by four different experts from the fields of Foreign Language Education and Educational Administration and Planning. Cultural adaptation of the instrument was also taken into account to culturally fit the items because the instrument was adapted from English to Turkish. Back translation was also performed to improve the reliability and validity of the research with making conceptual equivalence across languages. In order to reflect the intent of the wording in the original scale, translation was then corrected more accurately based on comments of the experts.

However, Turkish version of FCOS comprises 13-item measure with three dimensions as in the original scale; Faculty Openness to Change, Principal Openness to Change and Community Pressure for Change as presented in the following section in detail.

3.5.1.1. Pilot Study

A pilot study was performed by a convenience sample of 136 public primary and secondary level teachers working at different schools in different school districts in Ankara. In order to ensure construct validity of the scale, exploratory factor analysis was performed with the gathered data from 136 teachers.

Beforehand, the assumptions underlying factor analysis were checked. Specifically, having metric variables, substantial number of correlations greater than .30, significance of Bartlett's Test of Sphericity, Kaiser-Mayer Olkin (KMO) value (>.60), multivariate normality with absence of outliers were investigated for validation of the assumptions (Hair, Anderson, Tatham & Black, 2006). Indeed, Faculty Change Orientation Scale is a 6 point-scale that computes individual teacher scores (metric variable) for three subscales. Further, visual inspection of correlation matrix showed that there is substantial number of correlations greater than .30 that ensured the assumption. Bartlett's Test of Sphericity and KMO value

were also validated the assumptions as Bartlett's Test had significant value and KMO value (.80) exceeded the proposed criterion value of .60. In addition, for multivariate normality, normally distribution of all linear combinations of variables in the data set were checked with histograms, Q-Q plots, skewness and kurtosis values, Kolmogorov-Smirnov and Shapiro Wilk normality tests. The findings revealed that histograms and Q-Q plots were normally distributed, skewness and kurtosis values ranged between +3 and -3 (Tabachnick & Fidell, 2007). However, Kolmogorov-Smirnov and Shapiro Wilk normality tests were significant with indicating non-normality of the distribution. Since Kolmogorov-Smirnov and Shapiro Wilk normality tests are conservative tests, the effect of this violation is considered to be prevailed by checking histograms with normal curves. Finally, boxplots were checked for absence of outliers and the findings concluded that there were no serious outliers within the data set. Thus, validation of these assumptions indicated that factor analysis is appropriate to perform.

After validation of the assumptions, factor analysis was conducted on the 19 items of the Faculty Change Orientation Scale with undertaking principal axis factoring. The results of factor analysis showed that three factors with Eigen values greater than one were emerged with examining scree plot. Three factors accounted for 52.94% of the total variance in the data. Specifically, the first factor explained 29.08% of the variance and the second factor explained 12.51% of the variance while the third factor explained 11.36% of the variance. Further, scree plot also suggested three factors as can be seen from Figure 3.1.

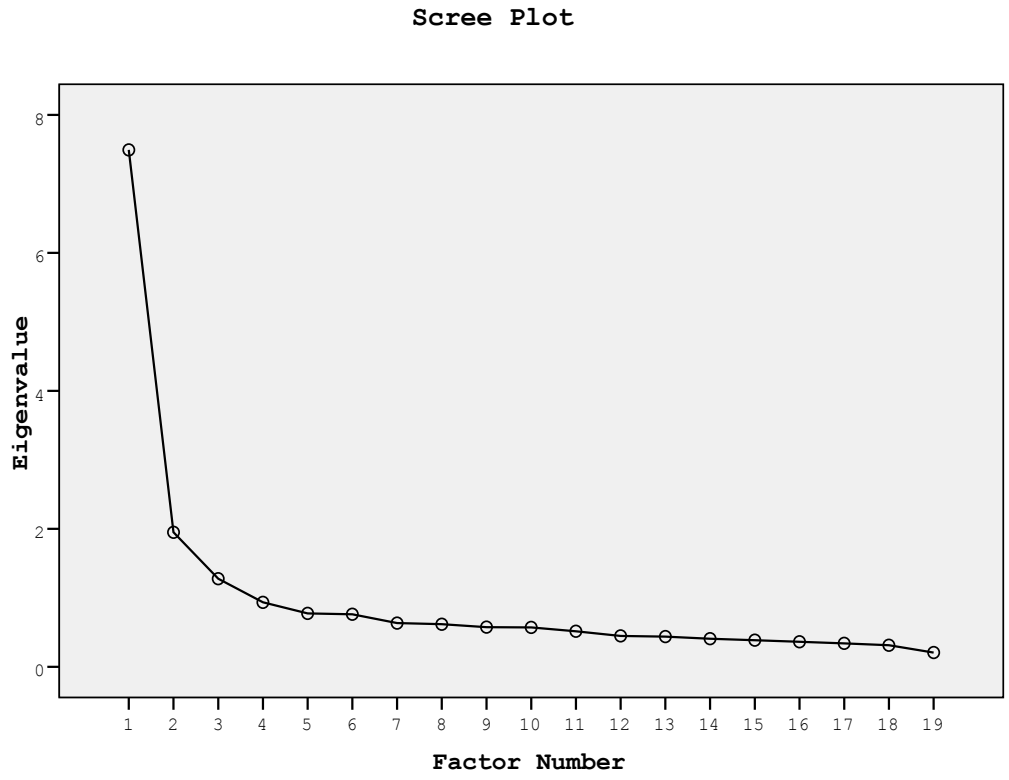

Figure 3.1 Scree Plot of Faculty Change Orientation Scale (FCOS) in Pilot Study

Factor analysis indicated that the new instrument have three factors as in the original scale; which are Faculty Openness to Change, Principal Openness to Change and Community Pressure for Change. Moreover, items loaded on the related factors, except for 6 items within the scale, with meeting the minimal level for interpretation of factor structure as being in the range of ±.30 to ±.40 (Hair, Black, Babin & Anderson, 2010). The factor loading are presented in Table 1 in Appendix G. In essence, factor loadings were ranged from .375 to .827. Due to not loading on related dimensions, 6 items within three dimensions were excluded from the scale for ensuring construct validity even if their factor loadings were acceptable and cut-point for the item load was taken as .30. Specifically, Turkish form of the scale consisted of 13 items that were loaded on three dimensions as in the original scale; however, Faculty Openness to Change dimension is measured by 6 items with extracting 3 items, Principal Openness to Change dimension

included 4 items with extracting 2 items, Community Pressure for Change dimension is measured by 3 items with extracting 1 items on the basis of exploratory factor analysis results.

In this study the reliabilities (Cronbach's Alpha) of three subscales of FCOS instrument were measures as .61 for Faculty Openness to Change subscale, .67 for Principal Openness to Change subscale and .70 for Community Pressure for Change subscale. It is clear why reliabilities of the subscales were low due to the small size of the pilot study sample. Table 3.2 summarizes the subscales of the original FCOS and Turkish version of FCOS with corresponding internal reliabilities as measured by Cronbach's Alpha and item numbers for the pilot study.

On the other hand, depending on the feedback from the participants in the pilot study, some of the demographic questions were altered and reworded to increase the comprehension of question wording for reaching clear and concise survey questions.

Table 3.2

Subscales and Reliabilities of Original vs. Turkish version of Faculty Change Orientation Scale (FCOS) with Corresponding Cronbach's Alpha Levels

	Original Scale		Turkish Version of the Scale	
Subscales	*Items*	*α*	*Items*	*α*
Faculty Openness to Change	9	.95	6	.61
Principal Openness to Change	6	.87	4	.67
Community Pressure for Change	4	.87	3	.70

3.5.2. Teachers' Sense of Efficacy Scale (TSES)

The Teachers' Sense of Efficacy Scale (TSES) or also known as Ohio State Teacher Efficacy Scale was developed by Tschannen-Moran and WoolfoIk-Hoy (2001) in order to assess teachers' sense of efficacy. The scale measures three aspects of Teacher Efficacy for Student Engagement (SE), Instructional Strategies (IS) and Classroom Management (CM) within twenty-four items. TSES is the extension of the Teacher Efficacy Scale (TES) designed by Gibson and Dembo (1984) and utilizes a Likert-type scale ranging from strongly nothing (1) to a great deal (9). In other words, the scale is answered based on a range from: nothing (1), very little (3), some influence (5), quite a bit (7), and a great deal (9). Further, TSES is conducted by Tschannen-Moran and Woolfolk Hoy (2001) within three studies by different pre-service and in-service teachers with the sample size 224, 217, and 410 respectively. The last study determined the item numbers and reliability values of each aspect in original TSES, as presented in Table 3.3. Specifically, reliability coefficients for three dimensions were as follows: .81 for teacher efficacy in SE, .86 for teacher efficacy in IS and .86 for teacher efficacy in CM. High alpha levels present high internal consistency reliability of the instrument. In addition, each dimension of the scale has 8 items.

Adaptation of the TSES instrument into Turkish is performed by Çapa, Çakıroğlu and Sarıkaya (2005) and TSES instrument is transformed as Turkish version of the Teachers' Sense of Efficacy Scale (TTSES) with the data gathered from 628 Turkish pre-service teachers in six faculties of education in Turkey. To ensure construct validity of the scale, confirmatory factor analysis and Rash analysis were performed and the results of the analysis revealed that Turkish form of the scale consists of 24 items that were loaded on three dimensions as in the original scale; which are efficacy SE, efficacy in IS and efficacy in CM. According to the results, the overall reliability (Cronbach's Alpha) of the twenty-four item TTSES is .93, the reliability of teacher efficacy in SE subscale is .82, the reliability of teacher efficacy in IS subscale is .86 and the reliability of teacher efficacy in CM

subscale is .84. Table 3.3 summarizes the subscales of Turkish version of TSES with corresponding internal reliabilities as measured by Cronbach's Alpha and item numbers.

Table 3.3

Subscales and Reliabilities of Original and Turkish version of Teachers' Sense of Efficacy Scale (TTSES) with Corresponding Cronbach's Alpha Levels

	Original Scale		Turkish Version of the Scale	
Subscales	*Items*	*α*	*Items*	*α*
Efficacy in Student Engagement	8	.81	8	.82
Efficacy in Instructional Strategies	8	.86	8	.86
Efficacy in Classroom Management	8	.86	8	.84
Overall	24	.94	24	.93

For making certain the construct validity of the TTSES for this study, EFA was conducted by means of the gathered data from 552 teachers working at the selected schools in Ankara. Depending on the results of factor analysis it can be concluded that 24 items are loaded on three factors as both in the original scale and Turkish version of the scale. For the exploratory factor analysis, three factors accounted for 59.79% of the total variance in the data. Specifically, the first factor explained 48.58% of the variance and the second factor explained 5.8% of the variance while the third factor explained 5.4% of the variance. These factors are Teacher Efficacy in Student Engagement, Teacher Efficacy in Instructional Strategies and Teacher Efficacy in Classroom Management.

According to the reliability test results, the overall reliability (Cronbach's Alpha) of the twenty-four item TTSES is .95, the reliability of teacher efficacy in SE subscale is .88, the reliability of teacher efficacy in IS subscale is .90 and the reliability of teacher efficacy in CM subscale is .90. Item numbers of the TTSES

for each dimension and reliabilities of the scale were calculated as can be seen from Table 3.4.

Table 3.4

Subscales Reliabilities of Turkish version of Teachers' Sense of Efficacy Scale (TTSES)

Dimensions	*N*	*α*
Teacher Efficacy in Student Engagement	8	.88
Teacher Efficacy in Instructional Strategies	8	.90
Teacher Efficacy in Classroom Management	8	.90
Overall	24	.95

3.6. Data Collection Procedure

For this study, the data were gathered through multiple Likert-type instruments that were administered to teachers in order to measure teachers' sense of efficacy and perceived openness to change in schools. Before the administration of the instruments, necessary permissions of Middle East Technical University (METU) Human Subjects Ethics Committee and Provincial Directorate of National Education were taken for the ethical issues and partaking public primary and secondary level school teachers from four districts in Ankara (see APPENDIX E and F).

In implementation part of the study, the respondents of the study were informed about the purpose of the research, then the two instruments in addition to demographic questionnaire were distributed and the teachers were asked for being volunteers to participate in the study.

The ethical conduct was followed strictly during the data collection process. In essence, confidentiality and anonymity were stressed in the study. Teachers were told that they are under no obligation to fill the surveys if they are uncomfortable

with the surveys. The respondents were also asked to sign a consent form (see Appendix A) which indicated that respondents are participated in the research voluntarily, they have chance to quit the study if they feel uncomfortable and they allow the use of given information by themselves for scientific studies. Essentially, explanation, distribution and administration of the surveys from beginning to the end took 10-15 minutes. Besides, the surveys were distributed to the participants in silent places like teachers' room or in coterie rooms within the breaks, lunch breakes and spare times. Furher, the surveys were not given at one time and collected all together at another day. That is to say, all the surveys were gathered through personally by the researcher. Due to having one researcher to collect data, the application process of the questionnaires continued in the course of April-May 2010.

3.7. Data Analysis

Both descriptive statistics and inferential statistics were utilized to analyze the gathered data. Descriptive and inferential statistical analyses of the study were performed by the software PASW (Predictive Analytical Software) Statistics 18.

In this study, descriptive statistical procedures were identified by analyzing the frequency distributions, central tendency and variability gathered through demographic questionnaire. In fact, descriptive statistics were conducted to organize and simplify the collected data by means of demonstrating demographic characteristics of the teachers as regards gender, age, marital status, type of the school, years of experience in teacher position, current job title, subject specialty, number of students in the school (school size), number of teachers in the school (teacher size), whether teachers performed administrative experiences, whether teachers attended in-service training and whether teachers participated in organizational change project with calculating frequency, percentage, mean, range and standard deviation.

In addition, inferential statistical procedures were also used to interpret the results of the Faculty Change Orientation Scale and Teachers' Sense of Efficacy Scale for measuring teachers' sense of efficacy and perceived openness to change in schools. Factor analysis was employed to investigate the factor structures of both the Faculty Change Orientation Scale and Teachers' Sense of Efficacy Scale after satisfaction of the assumptions. Subsequently, canonical correlational analysis was performed to examine the relationship between teachers' sense of efficacy and perceived openness to change in schools; however, the assumptions underlying the analysis were validated beforehand. Since this study is based on correlational research design with having two set of variables (sense of efficacy variables and openness to change variables), canonical correlation best suits for the aim of this study to find out a relationship between these variable sets (Tabachnick & Fidell, 2006). Additionally, significance level for the hypothesis was set as .05 in the study while analyzing the results.

3.8. Limitations

There are some limitations in the design and sampling procedure of the current study that are worth mentioning. In essence, this study might have some threats in terms of internal validity such as subject characteristics bias, location and history.

The most possible threat for this study can be subject characteristics threat. When the teachers were asked to select the option in the surveys that reflects their perceptions best, the participants may tend to select the desired option in the items of the instruments instead of selecting the real oneSecondly, even the consent form guaranteed confidentiality and anonymity, respondents may keep administrative censure in mind and feel pressure while answering the questions, which may lead to probable biased answers. Cultural differences, characteristics of the subjects and change experiences of the subjects in the past may be considered as confounding variables for the study due to influencing the answers of participants within the instruments. At this point, in order to overcome the

influence of this confounding variable, demographic characteristics of the participants were considered by data gathering for getting more information about the subjects.

The physical conditions of schools were also different within four different school districts that may cause location threat for internal validity. Since it was not possible to administer the instrument in the same place to the subjects who are in different schools, location threat can be considered as a threat for the study. Even though it was not possible to distribute instruments to the participants in the same place, surveys were administered to the subjects in teachers' rooms or in coterie rooms of the schools within silent moments.

In addition, the external validity of the study would decrease due to selecting the subjects of the study by cluster sampling. Yet, large number of subjects in the study may be prevailed over the negative effect of sampling procedure concerning generalizability of the findings.

Further, there are still some limitations of the study. The sample included only the teachers working at public primary and secondary level schools, private primary and secondary level schools were excluded due to their structural and functional characteristics. Besides, only perceptions of teachers were taken into account in the study, the opinions of administration, students, and parents were excluded.

Moreover, correlational studies only ascertain relationships and they do not show causation between variables. Therefore, the major conceptual limitation of the study can be the fact that it would leave the actual reason for the association. However, correlational studies imply causality between the variables and guide further studies to investigate the causal relationship.

Despite the limitations of the study, it is believed that the results of this study will not only help better understand the change orientations in schools, but it will also

be useful for school districts, school principals and Ministry of National Education (MONE) to begin to address the importance of human factor in change processes. Besides the study will guide future causal studies about openness to change and other organizational and individual level variables.

CHAPTER 4

RESULTS

This chapter presents the results of the statistical analyses of the data. The first section shows the results of a factor analysis of the Faculty Change Orientation Scale to assess the factor structure of the instrument. The second section presents the descriptive statistics for the variables within Faculty Change Orientation Scale and Turkish version of Teachers' Sense of Efficacy Scale. The third section depicts the descriptive statistics on demographic characteristics of the participants. Finally, the fourth section presents the satisfaction of necessary assumptions canonical correlation analysis.

4.1. Exploratory Factor Analysis

In order to ensure reliable and valid measurement of Faculty Change Orientation Scale (FCOS) and generate subscales as suggested by Smith and Hoy (2007), exploratory factor analysis was performed with data from 552 teachers working at public primary and secondary level schools. While performing exploratory factor analysis in the research, the results of pilot study were also considered to reach reliable findings. Before conducting the exploratory factor analysis, the required assumptions of the analysis were investigated.

4.1.1. Assumptions of Exploratory Factor Analysis

The necessary assumptions of exploratory factor analysis which are absence of outliers, having metric variables, substantial number of correlations greater than .30, significance of Bartlett's Test of Sphericity, Kaiser-Mayer Olkin (KMO) value (>.60), multivariate normality with absence of outliers should be ensured

before exploratory factor analysis in order to achieve reliable results (Hair et al., 2006).

Since Faculty Change Orientation Scale is a 6 point-scale that measures individual teacher scores for three subscales, this instrument may have considered as having metric variables.

Moreover, visual inspection of correlation matrix reveled that there is substantial number of correlations greater than .30 that validated the assumption. Indeed, there was no correlation coefficient that was less than .30.

Bartlett's Test of Sphericity and KMO value were also ensured the assumptions since Bartlett's Test had significant value and KMO value (.90) was exceed the proposed criterion value of .60. Significance of Bartlett's Test indicated that correlation matrix was significantly different from the identity matrix and there were no correlations of the items that were zero (Tabachnick & Fidell, 2007).

Further, for multivariate normality, normally distribution of all linear combinations of variables in the data set were controlled with histograms, Q-Q plots, skewness and kurtosis values, Kolmogorov-Smirnov and Shapiro Wilk normality tests. The findings of these tests and visual inspections showed that histograms and Q-Q plots were normally distributed, skewness and kurtosis values ranged between +3 and -3 (Tabachnick & Fidell, 2007). Yet, Kolmogorov-Smirnov and Shapiro Wilk normality tests were significant with presenting non-normality of the distribution. Due to the fact that Kolmogorov-Smirnov and Shapiro Wilk normality tests are conservative tests, the influence of this violation on the assumption can be prevailed by checking histograms with normal curves.

Lastly, boxplots were checked for absence of outliers and the findings revealed that there were no serious outliers within the data set. Therefore, validation of these assumptions showed that factor analysis is appropriate to conduct.

4.1.2. Results of Exploratory Factor Analysis

When the required assumptions were satisfied, factor analysis was performed on the 13 items of FCOS, depending on the pilot study findings, with undertaking principal axis factoring. The results of factor analysis revealed that three factors with Eigen values greater than one were exposed in addition to examining scree plot. In fact, Eigen values indicate the proportion of variance explained by the analysis of each factor. For this exploratory factor analysis, three factors accounted for 61.68% of the total variance in the data. More specifically, the first factor explained 41.12% of the variance and the second factor explained 12.67% of the variance while the third factor explained 7.9% of the variance. In addition, scree plot also suggested three factors as presented in Figure 4.1.

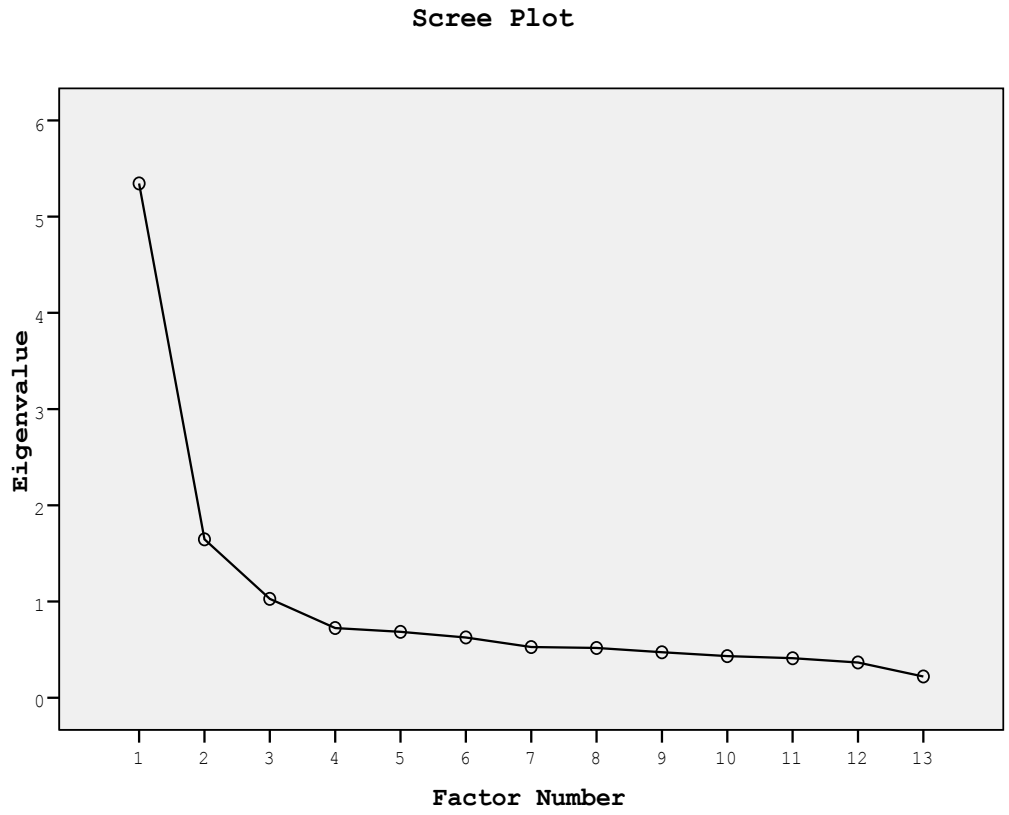

Figure 4.1 Scree Plot of Faculty Change Orientation Scale (FCOS)

Parallel to the original scale, exploratory factor analysis suggested three factors, which are Faculty Openness to Change, Principal Openness to Change and Community Pressure for Change. Besides, items loaded on the related factors, as in pilot study of the research, and the items met minimal level for interpretation of factor structure due to being in the range of ±.30 to ±.40 (Hair et al., 2010). The factor loadings are presented in Table 2 in Appendix G. Besides, factor loadings were ranged from .492 to .915. Since 6 items within three subscales were not loaded on related dimensions in the pilot study, they were excluded from the instrument in order to reach construct validity and cut-point for the item load was taken as .30. Consequently, Turkish form of scale consisted of 13 items that were loaded on three subscales as in original scale. Further, Faculty Openness to Change dimension is measured by 6 items, Principal Openness to Change dimension included 4 items and Community Pressure for Change dimension is measured by 3 items on the basis of factor analysis results, as in the pilot study.

Reliability coefficients (Cronbach's Alpha) were computed for each of the three dimensions of FCOS. The reliabilities of the thirteen-item FCOS instrument are; .87, .79, and .67 respectively for Faculty Openness to Change, Principal Openness to Change, and Community Pressure for Change dimensions. The overall reliability of the instrument was also calculated and the reliability of thirteen-item FCOS instrument was found as .87. Table 4.1 summarizes the subscales of the Turkish version of FCOS with corresponding internal reliabilities as measured by Cronbach's Alpha and item numbers.

Table 4.1

Dimensions and Reliabilities of Turkish version of Faculty Change Orientation Scale (FCOS)

Dimensions	*N*	*α*
Faculty Openness to Change	6	.87
Principal Openness to Change	4	.79
Community Pressure for Change	3	.67
Overall	13	.87

4.2. Demographic Characteristics of the Participants

Teachers working at public primary and secondary schools in Ankara, with a total of 552 teachers, participated in the study. The data from this sample was utilized in analyzing the relationship between teachers' sense of efficacy and their perceptions related to openness to change in schools. As can be seen from Table 4.2, the majority of the teachers in the participants were female (64.3%), while 35.7% of them were male in the sample of the study. The ages of the participants ranged from 23 to 63 with a mean value of 42.71 and a standard deviation of 7.87. The great majority of the teachers (43.7%) fell in the 40-49 age range, 27% were in 30-39 age bracket and 22.8% were between the ages of 50-59. However, thirty participants (5.4%) constituted the younger class of the sample with felling in the 20-29 age range and 6 (1.1%) of the teachers were older than 59. Further, 81.7% of the participants indicated that they were married while 18.3% of the teachers specified that they were single.

With regard to number of years in teaching experience, 237 participants (42.9%) have been working as teachers between 10-19 years and 182 teachers (33.0%) have been working as teachers between the years of 20-29 while 75 participants (13.6%) indicated that they have been employed in teaching between 30-39 years. Specifically, number of years in teaching ranged from 1 to 41 with a mean value of 19.23 and a standard deviation of 7.99. With respect to branch of the participants, the great majority of the teachers (N=97) had subject specialty in classroom teaching, 69 teachers had Turkish language and literature major, 68 participants had subject specialty in mathematics while 7.1% of the teachers (N=39) had English language branch and 4.3% of the participants (N=24) had major in history.

When the teachers were asked whether they participated in in-service training, the participants indicated that 91.8% of them had in-service training while the rest (N=45) did not attended to in-service training. On the other hand, 39.3% of the

teachers specified that they were participated in organizational change projects while 60.7% of the participants were not attended to organizational change projects within their teaching career.

With respect to administrative experience, the majority of the teachers (80.1%) stated that they had not administrative experience in their teaching career while 19.9% of the teachers indicated that they had administrative experience. Of the teachers having administrative experience, the great number of teachers (59.5%) had assistant school director experience, 17.1% of them specified as having school director experience, 9.9% of them had both school director and assistant school director experiences, 1.8% of them reported as having head assistant school director experience while the rest (11.7%) of them indicated other types of administrative positions as an experience.

A summary of the demographic characteristics of the participant teachers is presented in Table 4.2.

Table 4.2

Demographic Characteristics of the Participants

Variables	Category	*Frequency*	*Percent (%)*	*Mean*	*SD*	*Min.*	*Max.*
Gender							
	Male	197	35.7				
	Female	355	64.3				
Age							
	20-29	30	5.4				
	30-39	149	27.0				
	40-49	241	43.7	42.71	7.87	23	63
	50-59	126	22.8				
	59>	6	1.1				
Marital Status							
	Single	101	18.3				
	Married	451	81.7				
Experience							
	1-9	56	10.1				
	10-19	237	42.9				
	20-29	182	33.0	19.23	7.99	1	41
	30-39	75	13.6				
	39>	2	.4				
Subject Specialty							
	Classroom Teacher	97	17.6				
	Turkish Language	69	12.5				
	Mathematics	68	12.3				
	English Language	39	7.1				
	History	24	4.3				
	Biology	22	4.0				
	Other	233	42.2				
In-service Training							
	Yes	507	91.8				
	No	45	8.2				
Participating Organizational Change Project							
	Yes	217	39.3				
	No	335	60.7				
Administrative Experience							
	Yes	110	19.9				
	No	442	80.1				
Types of Administrative Positions							
	School Director	19	17.1				
	Assistant School Director	66	59.5				
	School Director & Assistant School Director	11	9.9				
	Head Assistant School Director	2	1.8				
	Other	13	11.7				

4.3. Descriptive Statistics Results of Faculty Change Orientation Scale and Teachers' Sense of Efficacy Scale

For investigating the relationship between teachers' sense of efficacy in student engagement, instructional practices, and classroom management and perceived openness to change in schools with regard to faculty openness to change, principal openness to change and community pressure for change, data were gathered from 552 teachers working at public primary and secondary schools in Ankara by the help of Faculty Change Orientation Scale (FCOS) and Turkish version of Teachers' Sense of Efficacy Scale (TTSES). The FCOS utilizes a 6-level Likert-type scale ranging from strongly disagree (1) to strongly agree (6) while TTSES utilizes a Likert-type scale ranging from strongly nothing (1) to a great deal (9). For each dimension of the scales, the mean scores were computed depending on the answers of the participants to the distributed surveys.

As can be seen from Table 4.3, descriptive statistics (mean, standard deviations, maximum and minimum scores) for each subscale were computed. When the subscales of FCOS scale are analyzed, the mean value of teachers' perceptions concerning faculty openness to change ($\overline{X}_{faculty}$=4.22, $SD_{faculty}$=.90) and perceptions about principal openness to change ($\overline{X}_{principal}$=4.27, $SD_{principal}$=1.03) are close to each other with similar standard deviations while the mean value of teachers' perception related to community pressure for change ($\overline{X}_{community}$=3.90, $SD_{community}$=.91) is lower than those dimensions. When the dimensions of TSES scale are analyzed, the mean value of teachers' sense of efficacy in instructional strategies ($\overline{X}_{instructional}$=7.25, $SD_{instructional}$=1.01) and in classroom management ($\overline{X}_{classroom}$=7.18, $SD_{classroom}$=1.04) subscales are very closely resembling each other whereas the mean score of teachers' sense of efficacy in student engagement ($\overline{X}_{student}$=6.70, $SD_{student}$=1.04) is lower than the two dimensions with having similar standard deviation.

Table 4.3

Descriptive Statistics for Faculty Change Orientation Scale (FCOS) and Turkish version of Teachers' Sense of Efficacy Scale (TTSES)

Variables	Dimensions	*M*	*SD*	*Min*	*Max*
Openness to Change					
	Faculty Openness to Change	4.22	.90	1	6
	Principal Openness to Change	4.27	1.03	1	6
	Community Pressure for Change	3.90	.91	1	6
Teachers' Sense of Efficacy					
	Teacher Efficacy in Student Engagement	6.70	1.04	1	9
	Teacher Efficacy in Instructional Strategies	7.25	1.01	1	9
	Teacher Efficacy in Classroom Management	7.18	1.04	1	9

4.3.1. Results of Perceived Openness to Change Dimensions

By utilizing Faculty Change Orientation Scale, teachers' perceptions concerning openness to change in schools comprise three subscales such as faculty openness to change, principal openness to change and community pressure for change, as previously stated with a Likert-type scale ranging from strongly disagree (1) to strongly agree (6). According to the scale, teachers' perceptions related to openness to change in schools are measured with 6 items for faculty openness to change, 4 items for principal openness to change and 3 items for community pressure for change.

A summary of the descriptive statistics results for teachers' perceptions related to faculty openness to change are presented in Table 4.4. The results revealed that majority of the participants scored the proposed items very closely in faculty openness to change dimension as strongly agree, agree or somewhat agree with mean scores of 4.24 (*SD*=1.18) for the first item, 4.34 (*SD*=1.13) for the second item and 4.22 (*SD*=1.24) for the last item. Further, the third and the fourth item of the subscale have very close mean values as 4.08 (*SD*=1.15) for the third one and

4.09 (*SD*=1.11) for the fourth one with approximate standard deviations. Due to being a reverse item, 72.3% of the participants rated the fifth item of the scale as strongly disagree, disagree or somewhat disagree with a mean score of 2.69 (*SD*=1.24). Further, mean scores of all items, except for the fifth item, showed that teachers' scores were close to agree in faculty openness to change dimension .

Table 4.4

Descriptive Statistics for the Faculty Openness to Change Dimension

Items	*M*	*SD*	Agree* (%)	Disagree** (%)
In this school, faculty welcomes change.	4.24	1.18	79.2	20.8
Faculty in this school embraces new ideas.	4.34	1.13	82.9	17.1
In this school, teachers are receptive to substantial changes.	4.08	1.15	74.6	25.4
Teachers in this school readily accept changes to new rules and procedures.	4.09	1.11	75.5	24.5
Faculty in this school rejects all but minimal changes.	2.69	1.24	27.7	72.3
In this school, the faculty relishes innovation.	4.22	1.24	80.6	19.4

*: percentage of participants responded as "Strongly Agree", "Agree" and "Somewhat Agree"
**: percentage of participants responded as "Strongly Disagree", "Disagree" and "Somewhat Disagree"

As can be seen from the Table 4.5, descriptive statistics results for teachers' perceptions concerning principal openness to change showed similar mean scores with being lower mean values compared to other two dimensions of the scale. Due to being structured as reverse items, the results for this dimension are required to be examined in a reverse way to draw conclusions. Specifically, the results indicated that majority of the teachers scored the directed items as choosing strongly disagree, disagree or agree with mean scores of 2.89 (*SD*=1.38) for the first item, 2.82 (*SD*=1.39) for the second item, 2.70 (*SD*=1.18) for the third item and 2.52 (*SD*=1.38) for the last item. The percentages of each item also revealed disagreement of participants for this dimension as presented in Table 4.5. Likewise, the mean values of all items revealed that participants' ratings were very close to somewhat disagree in principle openness to change dimension.

Table 4.5

Descriptive Statistics for the Principal Openness to Change Dimension

Items	*M*	*SD*	Agree* (%)	Disagree** (%)
In this school, the principal balks at new suggestions.	2.89	1.38	35.5	64.5
In this school, the principal is slow to change.	2.82	1.39	32.2	67.8
In this school, the principal is often resists changes suggested by parents.	2.70	1.18	26.1	73.9
In this school, the principal is committed no change.	2.52	1.36	25.9	74.1

*: percentage of participants responded as "Strongly Agree", "Agree" and "Somewhat Agree"
**: percentage of participants responded as "Strongly Disagree", "Disagree" and "Somewhat Disagree"

The results indicated that majority of the participants scored the proposed items differently in community pressure for change dimension, as can be seen from Table 4.6. Specifically, majority of the teachers rated proposed items very closely in community pressure for change dimension as strongly agree, agree or somewhat agree with mean scores of 4.09 (*SD*=1.10) for the second item and 4.16 (*SD*=1.22) for the last item while nearly half of the participants disagreed the first item with a mean score of 3.45 (*SD*=1.18). In short, mean scores of all items showed that teachers' scores were close to somewhat agree in community pressure for change dimension of the scale.

Table 4.6

Descriptive Statistics for the Community Pressure for Change Dimension

Items	*M*	*SD*	Agree* (%)	Disagree** (%)
In this school, suggestions by the Parent Teacher Association often produce change.	3.45	1.18	52.8	47.2
Faculty in this school is open to ideas of the parents.	4.09	1.10	74.5	25.5
Most community members are happy with their schools.	4.16	1.22	75.0	25.0

*: percentage of participants responded as "Strongly Agree", "Agree" and "Somewhat Agree"
**: percentage of participants responded as "Strongly Disagree", "Disagree" and "Somewhat Disagree"

4.3.2. Results of Teachers' Sense of Efficacy Dimensions

By means of using Teachers' Sense of Efficacy Scale, teachers' sense of efficacy covers three subscales such as teacher efficacy in student engagement, teacher efficacy in instructional strategies and teacher efficacy in classroom management, as mentioned previously with a Likert-type scale ranging from strongly nothing (1) to a great deal (9). According to the scale, teachers' sense of efficacy is measured with 8 items for teacher efficacy in student engagement, 8 items for teacher efficacy in instructional strategies and 8 items for teacher efficacy in classroom management.

A summary of the descriptive statistics results for teachers' sense of efficacy in student engagement is presented in Table 4.7. The results showed that great majority of the participants' sense of efficacy for student engagement ratings leaned toward "a great deal" with having very close mean scores of 6.60 (*SD*=1.40) for the second item, 6.57 (*SD*=1.46) for the third item, 7.05 (*SD*=1.31) for the fourth item, 6.93 (*SD*=1.34) for the fifth item, 6.93 (*SD*=1.35) for the sixth item, 6.69 (*SD*=1.41) for the seventh item and 6.70 (*SD*=1.59) for the last item. Only 1.6% of the teachers rated the first item of the teacher efficacy in student engagement dimension as nothing with the lowest mean score of 5.94 (*SD*=1.56). It can be concluded that the mean scores for this subscale is lower than the two dimensions of the scale. Further, the mean score of all items, except for the first item, indicated that teachers' ratings were close to 7 which corresponds to quite a bit in teacher efficacy in student engagement dimension of the scale.

Table 4.7

Descriptive Statistics for the Teacher Efficacy in Student Engagement

Items	*M*	*SD*	Nothing	Very Little-Some Influence* (%)	Quite a Bit-A great Deal** (%)
How much can you do to get through to the most difficult students?	5.94	1.56	1.60	41.8	56.6
How much can you do to help your students think critically?	6.60	1.40	.20	21.1	78.7
How much can you do to motivate students who show low interest in school work?	6.57	1.46	.70	23.0	76.3
How much can you do to get students to believe they can do well in school work?	7.05	1.31	.20	12.4	87.4
How much can you do to help your students value learning?	6.93	1.34	.20	15.3	84.5
How much can you do to foster student creativity?	6.93	1.35	.40	14.5	85.1
How much can you do to improve the understanding of a student who is failing?	6.69	1.41	.50	17.1	82.4
How much can you assist families in helping their children do well in school?	6.70	1.59	.90	20.3	78.8

*: percentage of participants responded as "Very Little" and "Some Influence"
**: percentage of participants responded as "Quite A Bit" and "A Great Deal"

As can be seen from Table 4.8, descriptive statistics results for teachers' sense of efficacy for instructional strategies showed similar mean scores with higher mean scores. The results for this dimension revealed that great majority of the teachers scored the proposed items as choosing quite a bit or a great deal with mean scores of 7.62 (*SD*=1.23) for the first item, 7.39 (*SD*=1.16) for the second item, 7.44 (*SD*=1.23) for the third item, 6.76 (*SD*=1.52) for the fourth item, 7.08 (*SD*=1.32) for the fifth item, 7.62 (*SD*=1.19) for the sixth item and 7.10 (*SD*=1.35) for the seventh item. Only .70% of the teachers rated the last item of the teacher efficacy in instructional strategies dimension as nothing with the mean score of 6.97 (*SD*=1.59). Moreover, the mean value of all items for teachers' sense of efficacy in instructional strategies was around 7 that points out the level of efficacy as

quite a bit. The percentages of each item also revealed the level of participants' sense of efficacy for instructional strategies dimension as presented in Table 4.8.

Table 4.8

Descriptive Statistics for the Teacher Efficacy in Instructional Strategies

Items	*M*	*SD*	Nothing	Very Little-Some Influence* (%)	Quite a Bit-A great Deal** (%)
How well can you respond to difficult questions from your students?	7.62	1.23	.00	6.4	93.6
How much can you gauge student comprehension of what you have taught?	7.39	1.16	.00	6.5	93.5
To what extent can you craft good questions for your students?	7.44	1.23	.00	7.8	92.2
How much can you do to adjust your lessons to the proper level for individual students?	6.76	1.52	.70	16.4	82.9
How much can you use a variety of assessment strategies?	7.08	1.32	.00	12.3	87.7
To what extent can you provide an alternative explanation or example when students are confused?	7.62	1.19	.00	5.1	94.9
How well can you implement alternative strategies in your classroom?	7.10	1.35	.20	11.1	88.7
How well can you provide appropriate challenges for very capable students?	6.97	1.59	1.10	14.5	84.4

*: percentage of participants responded as "Very Little" and "Some Influence"
**: percentage of participants responded as "Quite A Bit" and "A Great Deal"

The descriptive statistics results for teachers' sense of efficacy for classroom management indicated that great majority of the participants scored the proposed items in the scale with similar percentages and higher mean scores, as presented in Table 4.9. The results for this dimension showed that great majority of the teachers scored the proposed items as choosing quite a bit or a great deal with mean scores of 7.03 (*SD*=1.39) for the first item, 7.44 (*SD*=1.38) for the second item, 7.18 (*SD*=1.32) for the third item, 7.31 (*SD*=1.26) for the fourth item, 7.29

(*SD*=1.32) for the fifth item, 7.13 (*SD*=1.35) for the seventh item and 7.33 (*SD*=1.40) for the last item. Only .70% of the teachers rated the sixth item of the teacher efficacy in classroom management dimension as nothing with the lowest mean score of 6.74 (*SD*=1.38). Besides, it can be concluded that the mean score of all items were close to the "quite a bit" level of efficacy for teachers' sense of efficacy in classroom management. The percentages of each item also indicated the level of participants' sense of efficacy for classroom management dimension as can be seen from Table 4.9.

Table 4.9

Descriptive Statistics for the Teacher Efficacy in Classroom Management

Items	*M*	*SD*	Nothing	Very Little-Some Influence* (%)	Quite a Bit-A great Deal** (%)
How much can you do to control disruptive behavior in the classroom?	7.03	1.39	.20	14.3	85.5
To what extent can you make your expectations clear about student behavior?	7.44	1.38	.20	9.1	90.7
How well can you establish routines to keep activities running smoothly?	7.18	1.32	.00	11.7	88.3
How much can you do to get children to follow classroom rules?	7.31	1.26	.00	8.7	91.3
How much can you do to calm a student who is disruptive or noisy?	7.29	1.32	.00	10.5	89.5
How well can you establish a classroom management system with each group of students?	6.74	1.38	.70	16.1	83.2
How well can you keep a few problem students from ruining an entire lesson?	7.13	1.35	.20	13.6	86.2
How well can you respond to defiant students?	7.33	1.40	.40	9.4	90.2

*: percentage of participants responded as "Very Little" and "Some Influence"
**: percentage of participants responded as "Quite A Bit" and "A Great Deal"

4.4. Canonical Correlation Analysis

The aim of the study was to explore the relationship teachers' sense of efficacy and their perceptions concerning openness to change in schools. In order to conduct this statistical analysis, canonical correlation was conducted. For analyzing canonical correlation, sample size is a critical factor for generalizability of the results. Tabachnick and Fidell (2007) suggested that at least 10 cases per variable are necessary to validate this requirement. In this research, this requirement is ensured for conducting canonical correlation analysis as the sample of the study includes 552 cases and the study based on 6 variables.

Before conducting the canonical correlation analysis, descriptive statistics of the canonical variables (Table 4.3) and the required assumptions of the analysis were investigated.

4.4.1. Assumptions of Canonical Correlation Analysis

The required assumptions of canonical correlation which are absence of outliers, missing data, multivariate normality, homoscedasticity, linearity and multicollinearity should be validated before conducting canonical correlation analysis in order to attain reliable results (Tabachnick & Fidell, 2007).

Missing Data

Due to being sensitive for minor changes in a data set, canonical correlation needs to consider the estimation of cases with missing data. When a screening is run through PASW Statistics 18 (Table 4.10), it was found that there were missing values in a large data set and 5% or less of the data points are missing in a random pattern which do not cause serious problem and not affect the generalizability of the results (Tabachnick & Fidell, 2007).

Table 4.10

Valid and Missing Data Set

N	Faculty Openness to Change	Principal Openness to Change	Community Pressure for Change	Efficacy in Student Engagement	Efficacy in Instructional Practices	Efficacy in Classroom Management
Valid	541	530	540	526	539	544
Missing	11	22	12	26	13	8

Outliers

The other factor that is required for conducting canonical correlation is the absence of outliers in a data set. In this study, the outliers were checked with box-plot. The inspection of box-plot showed that there are some outliers on the variables as seen in Figure 4.2. However, it was seen that there were no serious outlier in any of the cases.

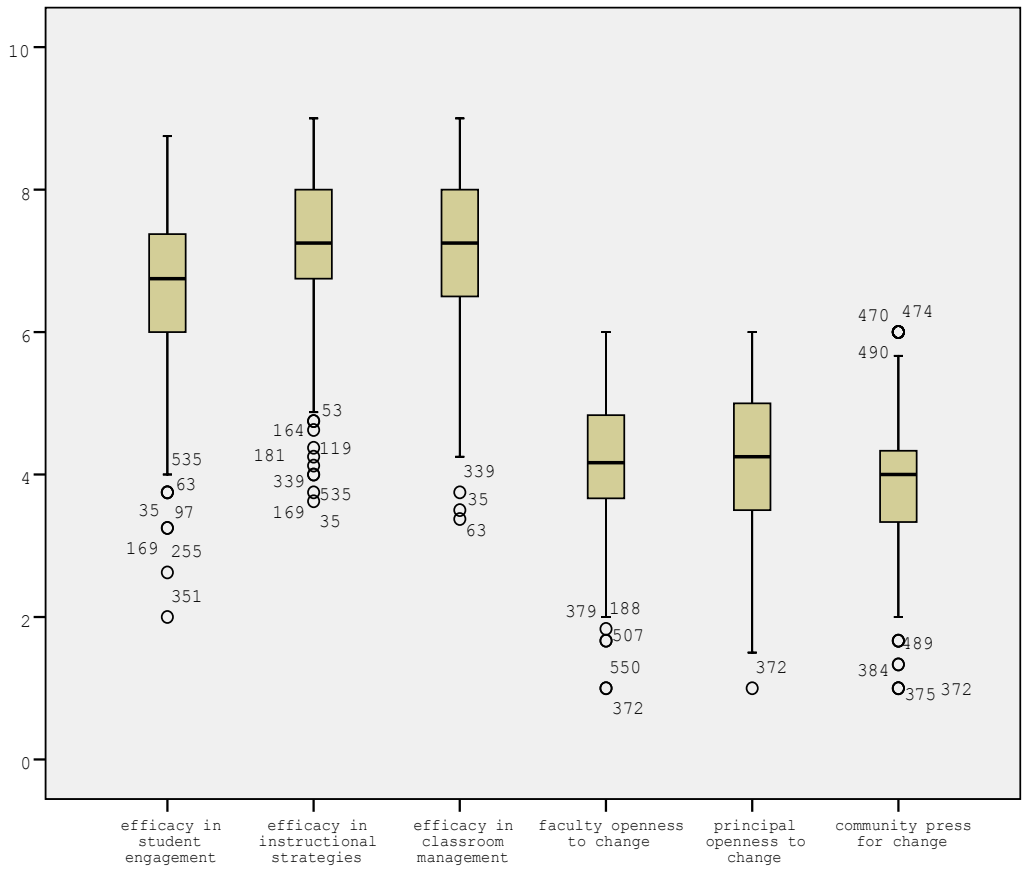

Figure 4.2 Box-Plot for Outlier Check

Multivariate normality

In order to check multivariate normality of canonical correlational analysis, it is necessary that all variables and all linear combinations of variables in a data set should be normally distributed (Tabachnick & Fidell, 2007). It is asserted that if all variables are normally distributed, the likelihood of multivariate normality increases. Hence, univariate and multivariate normality were checked for the analysis. For univariate normality, histograms, Q-Q plots, skewness and kurtosis values, Kolmogorov-Smirnov and Shapiro-Wilk normality tests were checked.

Depending on the histograms and Q-Q plots, the variables were normally distributed. Besides, skewness and kurtosis values were taken into account to check normality and it was found that skewness and kurtosis values ranged between -1 and 1 which validates the skewness and kurtosis assumption due to cut-off values of skewness and kurtosis for the normality assumption are stated as -3 to +3 (Tabachnick & Fidell, 2007). Furthermore, Kolmogorov-Smirnov and Shapiro-Wilk's normality tests were checked for normality assumptions and these tests indicated that these normality tests were significant. Therefore, it is clear that Kolmogorov-Smirnov and Shapiro-Wilk's normality tests were not validated normality assumption for this study. However, these tests are conservative tests and not violating the univariate normality assumptions by histograms with normal curves and with having large sample size in this study (N=552) decreased the detrimental effects of nonnormality (Hair et al., 2010).

Homoscedasticity and Linearity

In order to check homoscedasticity assumption, scatter plots for all variables were examined. As can be seen from Figure 4.3, the scatter plots revealed no pattern which shows that there were no large differences in spreading out of each scatter plot and validates the homoscedasticity assumption of the canonical analysis.

Linearity assumption of the study was also checked by scatter plots. Figure 4.3 presents that there are linear relationships between the variables of the conducted study.

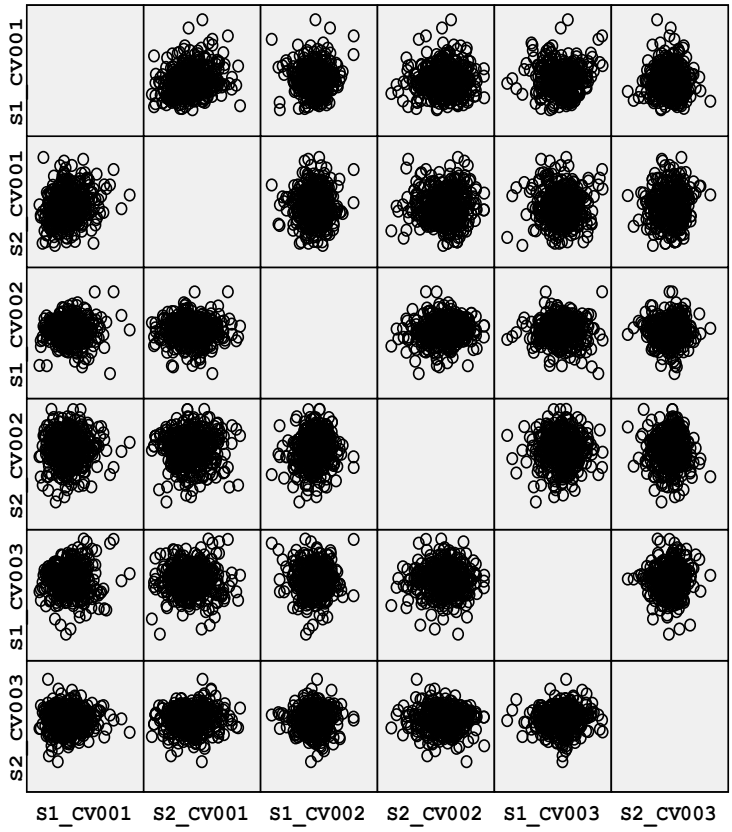

Figure 4.3 Scatter Plots for Homoscedasticity and Linearity Assumptions

Multicollinearity

In order to diagnose multicollinearity as an assumption check, correlations among Canonical variables were checked from bivariate correlations which are presented in correlation matrix (Table 4.11). Correlations among teachers' perceived openness to change and their sense of efficacy variables did not exceed the critical value of .90 for multicollinearity (Field, 2005) that ensures multicollinearity assumption for this research.

Table 4.11

Bivariate Correlations among Teachers' Sense of Efficacy and Perceived Openness to Change Variables

	1	2	3	4	5	6
Faculty Openness to Change	1.00					
Principal Openness to Change	.77(**)	1.00				
Community Pressure for Change	.75(**)	.79(**)	1.00			
Teacher Efficacy in Student Engagement	.14(**)	.11(**)	.15(**)	1.00		
Teacher Efficacy in Instructional Strategies	.07	.09(*)	.12(**)	.45(**)	1.00	
Teacher Efficacy in Classroom Management	.21(**)	.15(**)	.15(**)	.57(**)	.44(**)	1.00

* $p<0.05$ (2-tailed)
** $p<0.01$ (2-tailed)

4.4.2. Results of Canonical Correlation Analysis

Meeting the assumptions of canonical correlation, (absence of outliers, missing data, multivariate normality, homoscedasticity, linearity and multicollinearity), canonical correlation analysis was conducted in order to find out the correlation between FCOS variable set and TTSES variable set. The results of the analysis are presented in Table 4.12.

The results of the canonical correlation analysis showed that the canonical correlation coefficient for the relationship between teachers' sense of efficacy and perceived openness to change was .21, which contributed 14% of the variance overlap between canonical variates in a pair. Since canonical correlation coefficient was below .30, it can be interpreted that the relationship between teachers' sense of efficacy and perceived openness to change variable sets is low.

Table 4.12

Correlations, Standardized Canonical Coefficients, Canonical Correlations, Percentages of Variance, and Redundancies between Teachers' Sense of Efficacy and Perceived Openness to Change Variables

	First Canonical Variate	
	Correlations	Coefficients
Teachers' Efficacy		
In Student Engagement	-.97	-1.27
In Instructional Strategies	-.61	.31
In Classroom Management	-.64	.08
Percentage of Variance	.58	
Redundancy	.03	
Teachers' Perceived Openness to Change		
Faculty Openness to Change	-.64	-.14
Principal Openness to Change	-.39	.12
Community Pressure for Change	-.99	-.97
Percentage of Variance	.51	
Redundancy	.02	
Canonical Correlation	.21	

The first canonical variate for teachers' sense of efficacy accounted for significant relationship between the second variate for teachers' perceived openness to change variables, χ^2 (9) = 28.70, p=.001. The first pair of canonical variate including teacher efficacy in student engagement (-.97), teacher efficacy in instructional strategies (-.61) and teacher efficacy in classroom management (-.64) were associated with the second pair of canonical variate variables which were faculty openness to change (-.64), principal openness to change (-.39) and community pressure for change (-.99), as can be seen from Figure 4.4.

When the relation between first canonical variate and second canonical variate was considered, it was found that the value for the first canonical variate is .58 for the first set of variables and the value for the second canonical variate was .51 for the second set of variables as presented in Figure 4.4, which means that the first canonical variate accounted for 58% of the variance from self efficacy variables

and the second canonical variate accounted for 51% of the variance from openness to change variables.

On the other hand, when the relationship between first variate and the canonical variables of the second variate was taken into account, it was revealed that 3% of the total variance of perceived openness to change variables is explained by the teacher efficacy variables. Similarly, teacher efficacy variate accounted for 2% of the variance in the perceived openness to change variables.

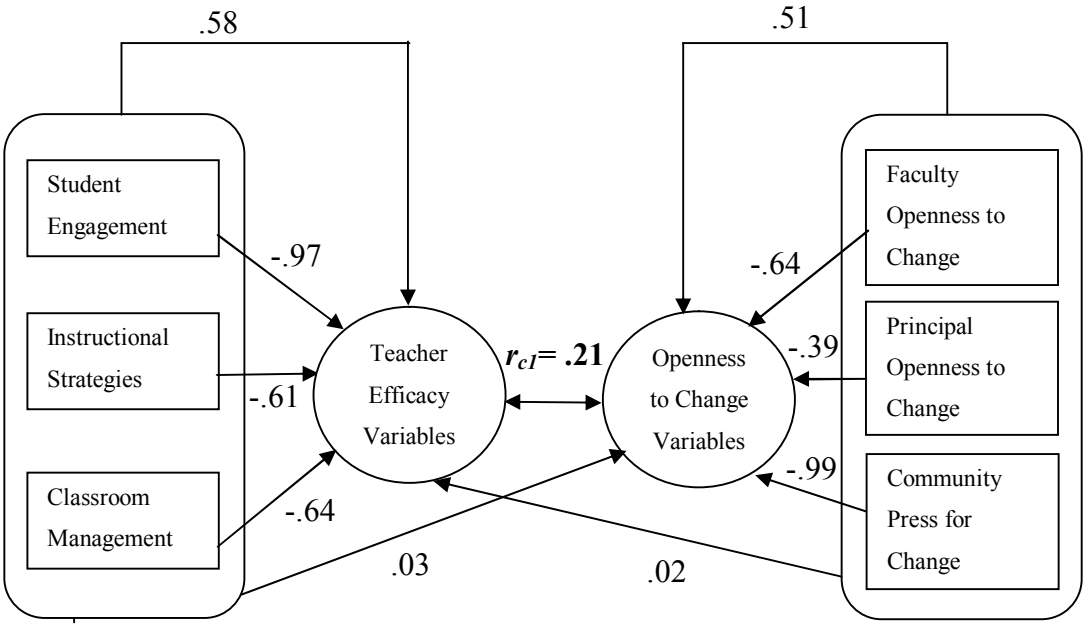

Figure 4.4 Summary of the Canonical Correlation Analysis

For this study, the correlational analysis revealed low relationship between the variables of teachers' sense of efficacy and the variables of perceived openness to change. Accordingly, discussion of the analysis of the data and the implications of the findings are presented in Chapter 5.

CHAPTER 5

DISCUSSION

In this chapter, the results of the study are discussed and interpreted within the boundaries of attitudes to change and openness to change literature. Besides, implications for practice and recommendations for further research studies are presented in details.

5.1. Discussion of the Study Results

This study was an associational research study and the design of the study was correlational research in which the relationship between teachers' sense of efficacy and perceived openness to change in schools was investigated. The participants of the study include 552 teachers working at primary and secondary level public schools in four school districts in Ankara city.

In order to reach the purpose of the study, newly adapted Faculty Change Orientation Scale (FCOS) and Teachers' Sense of Efficacy Scale (TSES) were used. The results of the study ascertained the construct validity of the FCOS. Exploratory Factor Analysis (EFA) results revealed that the dimensions of the instrument loaded on three factors as in the original version of the scale. The findings of the EFA were consistent with the study performed by the developers of the scale (Kearney & Smith, 2009) since the loadings are based on three dimensions such as faculty openness to change, principal openness to change and community pressure for change. Coefficients of reliability (Cronbach's alpha) of the three factors were satisfactory and ranged from .67 to .87 for FCOS. In addition, Turkish version of the TSES also provided evidence by EFA for three-factor structure of the instrument; which are teacher efficacy in student

engagement, teacher efficacy instructional strategies and teacher efficacy in classroom management. Moreover, Cronbach's alpha coefficients of these three dimensions were satisfactory in the TSES with having range of .88 to .90. For TSES, the findings of the study were also consistent with the literature (Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2001).

In relation to perceived openness to change in schools, when descriptive study results are considered, it becomes clear that the teachers perceive their colleagues (faculty) and principals open to change while they perceive community pressure for change in the schools low. Specifically, the results revealed that teachers agree to the perception of their faculty's openness to change with high degrees of receptivity degree ($\overline{X}_{faculty}$=4.22). That is, teachers declared that new ideas and substantial changes are welcomed by faculty of the schools with high receptivity. Similarly, when the teachers were asked to indicate their perception related to innovation in their school with changes in rules and procedures of the schools, they indicated that these changes were embraced by the faculty with a high level.

Concerning teachers' perceptions of the principals' openness to change in schools the descriptive statistics findings showed that the principals of the schools, as perceived by the participants, welcome new change interventions in schools with high degrees of receptivity degree ($\overline{X}_{principal}$=4.27). Indeed, when the teachers were asked to point out dedication of the principals to change practices, they signify that principals in schools devote themselves to changes with high willingness.

Descriptive statistics findings related to community pressure for change, as perceived by teachers, showed that the pressure of the internal and external stakeholders of the schools are low ($\overline{X}_{community}$=3.90), compared to other dimensions. In fact, the results of this study suggest that the receptivity of the faculty (teachers in our case) to the local community's demands and the extent to

which the faculty of the schools are open to suggestions for change made by the community can be accepted as in low degree.

When the teachers were asked to show their perceptions whether the faculty in the schools are open to the ideas of the parents and whether the community members are glad with their schools, teachers somewhat agree with the statements in the questionnaire. That is, the perceptions of teachers about willingness of the stakeholders for change interventions can be considered as low. Likewise, the results of the study indicated that suggestions coming from Parent Teacher Associations (PTAs) are believed to be not influential in change processes in the schools. The reason why suggestions of PTA do not produce change in schools of Turkey can be related to disregarding the ideas of the parents. In Turkey, the purpose of PTAs mostly comprises the assistance of schools by supporting them financially with maintenance and repair of classrooms, sports halls, libraries and laboratories and meeting the needs of the schools to purchase goods and services (MONE, 2005). The other reason why community's receptivity for change was found as low is because the lack of close interrelations between school and parents in Turkish society. However, parents and citizens should be more involved in the schools for creation of a professional school environment where decisions were taken with a participatory approach (Pashiardis, 1994) because press coming from parent and the community alter school policy and have an impact on school's functioning (Tschannen-Moran & Hoy, 1998).

Low mean scores for community pressure for change dimension can be related to the centralized structure of Turkish Education System. In essence, all the decisions related to education policies and implementations of these policies at different levels are under the monopoly of MONE (Akyuz, 2001). Hence, change and development efforts are under the absolute tutelage of MONE. For example, change decisions related to physical infrastructures of schools, use of ICT in classrooms, administrative procedures in schools and curriculum diversification are all carried through MONE. Therefore, faculties, the principals and the

community have restrictions to be the part of the change processes in schools. In this context, it is essential to make necessary modifications giving enabling wider involvement of teachers and parents in change interventions. As a result, school principals will find possibility to invite teachers to participate in change decisions in schools (Pashiardis, 1994). Since participatory decision-making provides successful and effective change implementations (Vakola & Nikolaou, 2005), teachers were given chance to improve their roles in the classrooms by means of developing the curriculum, improvement of the school and alterations in instructional aspects. As well as if the parents were given opportunity to participate in change processes in schools, there will be close triangular relations for change interventions. That is to say, when the principals and MONE give permission for the participation of teachers and parents into decision making processes, all stakeholders of the schools may become to initiate and continue to partake in change initiatives more willingly.

In relation to teachers' sense of efficacy, descriptive statistics results showed that , compared to student engagement, teachers feel themselves "quite a bit" efficacious in instructional strategies ($\overline{X}_{instructional}$=7.25) and classroom management ($\overline{X}_{classroom}$=7.18). This means that teachers believe themselves at high level in using different assessment techniques and alternative strategies, responding students' questions and gauging student comprehension. Likewise, the findings indicated that teachers feel themselves adequate in controlling disruptive behaviors of the students and establishing a classroom management system with some routines in the class.

Why teachers have "quite a bit" sense of efficacy for instructional strategies and classroom management may stem from the demographic characteristics of the participants such as the age of the teachers and their teaching experience. In fact, demographic characteristics of teachers showed that great majority of the teachers (43.7%) fell in the 40-49 age range with a mean value of 42.71. Likewise, the experience of the participants was also high since great number of teachers

(42.9%) has teaching experience between 10-19 years. When the literature is examined in terms of having great sense of efficacy, in a study conducted by Chester and Beaudin (1996), it was found that teachers' age, prior experience, and school practices like collaboration with colleagues and level of available resources in the school have impact on self-efficacy beliefs of teachers. Soodak and Podell (1997) also supported this claim with asserting that teachers with more years of experience have greater personal teaching efficacy compared to teachers who are within the initial years of teaching. Furthermore, Campell (1996) revealed that experienced and older teachers have higher efficacy among other teachers. Indeed, teachers' confidence in implementing teaching activities and development of teacher efficacy are believed to strengthen by teaching experience of teachers.

However, the participants declared that they feel themselves just a little less efficacious than "quite a bit" in student engagement dimension ($\overline{X}_{student}$=6.70), indicating that students are helped and motivated by the teachers to improve their understanding and foster their creativity. When the teachers were asked to specify the degree of their efficacy on student engagement, especially for getting through most difficult students, improving the understanding of students, fostering student creativity, and motivating them to class work, the results revealed that teachers showed less sense of efficacy compared to other two dimensions (efficacy in instructional strategies and efficacy in classroom management). The reason of less sense of efficacy for student engagement can be related to the class size effect in schools. Since it was asserted that teachers expressed the chance of spending more time on classroom task and providing more feedback in small sized classes (Galton & Hargreaves, 1996), students can be motivated to school work and helped them to enhance their creativity. Yet, when the class size of schools in Turkey considered as large enough, teachers may have not demote the level of the instruction to each of the student in the classes for fostering their motivation. As a result, teacher may feel themselves just a little less efficacious in student engagement than being quite enough.

In order to find out the relationship between teachers' sense of efficacy and perceived openness to change, canonical correlation analysis was conducted between teachers' efficacy and perceived openness to change variables. However, conducted canonical correlation analysis indicated that there is low relationship between teachers' sense of efficacy and perceived openness to change in schools (<.30). This finding seems unexpected since school context is found having an important role in maintenance and development of teachers' sense of efficacy in many studies (Hipp & Bredeson, 1995; Rosenholtz, 1987; Webb & Ashton, 1987). Similarly, contextual factors such as organizational structure and climate of the school, behavior of the principal as regards possessing a leadership style, level of the school as being middle school or junior high school, sense of school community, subject matter and class of students, participation of teachers in decision making structures and collective efficacy of schools are suggested to be associated with teachers' sense of efficacy (Ashton & Webb, 1986; Raudenbush et al., 1992; Tschannen-Moran et al., 1998). That is, personal teaching efficacy is context specific construct rather than being a generalized expectancy (Tschannen-Moran et al., 1998). Since faculty's and principal's openness to change in addition to community pressure for change in schools can be considered as school context effects, a stronger relationship between teachers' sense of efficacy and perceived openness to change was expected to be found in this study.

Additionally, teachers' sense of efficacy, as being a personality factor, was expected to be related with openness to change perceptions in the research because micro level factors like psychological ones are found to have impact on change attempts in the literature (e.g., Bray, 1994; Wanberg & Banas, 2000). Correspondingly, as personality, personal development and attitudes of individuals towards change are propounded to be closely related to successful change initiatives (e.g., Aslan, Beycioglu & Konan, 2008), teachers' sense of efficacy as being a personality factor was anticipated to be associated with openness to change in schools. However, the reasons behind low correlation of teachers' sense of efficacy and perceived openness to change may be originated from

demographic characteristics of the participants like their age, low degree of parent involvement in school decision making processes and change initiatives, trust between teachers, principal and the parents, and leadership style of the principals in schools.

Conceivably, the low association between teachers' sense of efficacy and perceived openness to change in schools might arouse from the demographic characteristics of the teachers, especially from their ages. Since elderly age individuals were found as less positive about change initiatives within the organizations than their younger counterparts (Kirton & Mulligan, 1973) and the subjects of this study mostly comprised the age range from 40 to 49, age factor may be the cause of the low correlation even if the teachers feel that they were quite a bit efficacious in instructional strategies and classroom management aspects. Even though the participants claimed that they use alternative strategies in classrooms, implementing new instructional methods, keeping up with the curriculum diversification throughout the years and pursuing developing technology might be difficult for older teachers in schools. Hence, there may be a low association between teachers' efficacy and their perceptions about openness to change.

Within the realm of possibilities, low level of parental involvement in school decision making processes and change initiatives might be also the other reason for low correlation between the openness set of variable and self-efficacy set of variables. The related literature proved the association between teacher efficacy and parental involvement in school organizations (Rosenholtz, 1989). However, when teachers' responses about openness of schools for the suggestions of community accepted as in low degree for this research and the ineffectiveness of PTAs in schools of Turkey are considered, low correlation between teachers' sense of efficacy and perceived openness to change in schools might be possible.

In addition, based on the literature, it is also possible to speculate that the effect of trust between teachers, principal and the parents on teachers' sense of efficacy and

openness to change in schools. Specifically, existence of trust has an influence on teachers' self- efficacy and collective efficacy in schools (Tschannen-Moran & Goddard, 2000). Furthermore, the effects of trust are not limited only with self-efficacy, it is also propounded that trust is a critical element for successful implementation of organizational change and has an impact on employees' attitudes toward change (Albrecht, 2002). Accordingly, if there is no establishment of trust between school principals, teachers and parents in a school, the correlation between teachers' perceptions concerning openness to change and teachers' sense of efficacy may be attained in a low level.

Still the other reason behind low level of association might also stem from the leadership style of the principal in schools because the evidence related to effect of leadership style on teachers' efficacy and openness to change can be found in the literature. In essence, transformational leadership of the principal with sharing values and perspectives is preferred by the employees who are open to change, and in turn, work attitudes and job satisfaction of the employees are developed (Hogg, 2001; Schirmer & Lopez, 2001). When educational setting is considered, the leadership style of the principal is also related with teacher efficacy. For instance, if the principal provides teachers flexibility for classroom affairs and protect them from destructive factors in addition to supplying resources for them, a context in which teacher efficacy can enhance is created. In accordance with findings in the literature, leadership style of the principles in schools may have influence on the low correlation of teachers' sense of efficacy and perceived openness to change.

To sum up, even though the major aim of this research was to investigate the relationship between teacher efficacy and openness to change in schools as perceived by the teachers, the results of the study showed that there is a low relationship between these variables. However, findings of the research can contribute to knowledge and practice for change literature in Turkish educational

context and results of the study may allow teacher educators, policy makers and school principals a meaningful inquiry about change processes in school settings.

5.2. Implications for Practice

Both for-profit organizations and non-profit organizations (including schools) are exposed to internal and external pressures that cause structural and functional changes in these organizations. In these change interventions, organizations are obliged to pay closer attention to individual dynamics. Since the first steps of change initiatives are taken at individual level, behaviors and attitudes of people are important for successful change implementations in organizations. However, many organizations fail to succeed change interventions due to neglecting the human side of change (Clegg & Walsh, 2004). At this point, it is important to consider personality, personal development and attitudes of individuals towards change for accomplishment of organizational and educational change applications. This study contributes to widen the knowledge base on the relationships between individual constructs and one aspect of attitudes towards change, openness to change.

When school setting is considered, it is necessary to take into account teachers' personal orientations towards change in addition to emphasizing their personality characteristics for covering up the failure behind change initiatives in schools. Since negative employee behaviors and underestimation of human factor on change processes are pointed out as the main reasons of change failures, openness to change of the teachers and the principal are required to be considered in school organizations. In this respect, efficacy of teachers during change interventions is also necessary to be evaluated since personal factors and the external environment are in reciprocal determinism. Therefore, this study presents empirical evidence with investigating the relationship between teachers' sense of efficacy and perceived openness to change in schools. Although the results suggest low association, it is still important to show the correlation between an important

personality construct and openness to change. In other words, the findings add to the organizational change and sense of efficacy literature.

This study theoretically provides a substantial contribution on literature of organizational change in schools by examining micro level perspective with considering human side of change. Although several conceptual works elaborated on the relationships between self efficacy and attitudes towards change, these associations have rarely been empirically investigated. For example, Armenakis et al., (1993) implied that there is a relationship between readiness to change and efficacy. This study is one of the first attempts to document the relationship between self-efficacy and openness to change. Due to insufficient number of research exploring individuals' attitudes toward change in relation to personality constructs, this research broadens the knowledge base for guiding change interventions in schools with providing a meaningful inquiry for teacher educators, policy makers and principals of the schools.

Another contribution of this study is related to the sample of the study. This study was conducive to comprehend change orientations in schools from teachers' perspectives rather than principals' perspectives, unlike the previous literature. As teachers were thought to be practitioners, or real owners of teaching profession, their behaviors and attitudes largely determine the destiny of change interventions in schools.

It is believed that the study has made significant contributions to methods of studying attitudes towards change as well. First, this study employed two previously developed instruments, namely Teachers' Sense of Efficacy Scale (TSES) and Faculty Change Orientation Scale (FCOS). The scales are commonly used instruments in their respective fields. In this study both the factor structure and reliability values were parallel to the findings of the previous studies. Accordingly, the FCOS was adapted into Turkish for this study. Additionally, TSES is a useful tool to measure teachers' beliefs about themselves concerning

their capabilities to arrange and perform actions for successful specific teacher tasks while FCOS gauges the willingness of a faculty to embrace change and faculty's perception related to principal's openness to change with assessing teachers' willingness to respond to community pressure for change. Hence, this study has contributed to validation process of these two instruments. Particularly, the study has contributed to the validation of FCOS in an international setting. As a result, the study has made an important contribution to validation of instruments in the field.

This study has made some concrete contribution to practice as well. Findings of this study suggest that stakeholders' pressure plays a limited role in school change processes. Likewise, the contribution of external stakeholders of schools is considered to a very limited extent in the design and implementation of change interventions in schools. Since pressure from parents and the community can have opportunity to change school policy and influence schools' functioning, it is necessary to consider suggestions coming from parents and account on parents' views in decision making processes. This is expected to get more support for the change interventions in schools. Hence, it can be suggested to establish stronger ties with different external stakeholders, particularly with PTAs in schools. Rather than reducing the role of the PTAs to a financial resource role, more channels need to be established to capitalize on their views in different change interventions in schools. In addition, although the study suggests low relationship between self efficacy and openness to change, MONE, Provincial Directorates, and individual school administrators need to (1) offer training programs for enhancing self efficacy constructs on the part of individual, (2) adapt management practices enriching but not weakening the self-efficacy construct on the part of the individual.

Finally, the results of the current study suggest that, principals and policy makers could use the data gathered from the administered instruments to enhance the faculty's receptivity for change and teachers' willingness to respond to

community pressure for change. Utilizing the information gathered from this research provides practitioners a meaningful inquiry to develop their commitments for organizational change in schools.

5.3. Recommendations for Further Research

Based on the findings of the study, there are some suggested recommendations for further research as in the following:

In this study, the relationship between teachers' sense of efficacy and perceived openness to change in schools were examined. However, teachers' sense of efficacy as only being one variable in a myriad of school context variables correlating openness to change in schools, other school context variables that are directly related to school climate can also be used to gauge in order to find a relationship between attitudes towards change. Indeed, school context variables like behavior of the principal, decision making structures of the school, leadership style of the principle, sense of school community, and school infrastructure can be investigated considering the association between teachers' efficacy. Furthermore, whether there is a relationship between teachers' receptivity to change and student achievement and whether there is a relationship between collective efficacy and teachers' willingness to change can be explored in future studies.

When the related literature is considered, openness to change is seen as a construct in organizational change affected by individual difference, context-specific, content-based and process variables (Armenakis & Harris, 2002; Devos et al., 2007; Wanberg & Banas, 2000). At this point, it is obvious that teachers' sense of efficacy is only one of the individual level variables within various variables. Hence, other variables (e.g., leadership style of the principal, participation of teachers in decision making process) can be examined to generate an extensive organizational change literature in school settings.

Due to having time restriction, the data for this study gathered from four school districts in Ankara. In future studies, the number of school districts can be widened to comprise all the school districts in Ankara in order to present a broader study concerning openness to change and teachers' efficacy. Moreover, further studies can utilize teachers' receptivity to change considering school locations such as urban, rural or suburban in the city of Ankara.

The sample of this research included teachers working at only primary and secondary level public schools in Ankara. That is, primary and secondary level private teachers were excluded from the study due to their different authorization mechanisms. However, further studies can include all the teachers in different school types to increase the generalizability of the findings and have chance to compare teachers' openness to change and their sense of efficacy in different type of schools. Due to not having equal size of participants for each group, the difference between teachers' subject specialty did not emphasized for this study. Hence, further studies can focus on subject specialty of teachers to investigate the difference between teachers' openness to change and their efficacy in terms of their branch.

Even though this study is based on a quantitative research design, researchers can arrange the same study with qualitative research design in the further studies to deepen the subject by getting teachers', principals' and the parents' perceptions related to teachers' and principals' willingness to change in schools instead of only concentrating on teachers.

Since Faculty Change Orientation Scale is newly adapted instrument in Turkish literature, the validity of this scale should be ensured again by means of gathering data from different samples in order to attribute this scale to organizational change literature in educational settings.

Finally, this study was based on a correlational research design and suggested a low relationship between teachers' sense of efficacy and perceived openness to change in schools. Causal relationship between these variables was not explored; however, further studies can examine the causal relationship between teachers' efficacy and openness to change in schools as a different research design.

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APPENDICES

APPENDIX A
INFORMED CONSENT FORM

Gönüllü Katılım Formu

Bu çalışma, ODTÜ Eğitim Bilimleri Bölümü yüksek lisans öğrencisi Derya YILMAZ tarafından, Yrd. Doç. Dr. Yaşar KONDAKÇI' nın danışmanlığında yürütülen bir yüksek lisans tez çalışmasıdır. Ankara ilini kapsayan bu çalışmada amaç, öğretmenlerin öz-yeterlik algıları ile okullarında algıladıkları örgütsel değişime açık olma durumları arasındaki ilişkiyi incelemektir. Bu çalışmanın sonucunda elde edilecek bilgiler okullardaki değişim yönetiminin daha etkin yapılmasına katkı sağlayacaktır. Çalışmaya katılım tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek bilgiler bilimsel amaçlarla kullanılacaktır.

Aşağıda öz-yeterlik algısı ve örgütsel değişime açık olma durumuna yönelik toplam 43 ifade bulunmaktadır. Lütfen her bir maddeyi okuyarak size en uygun seçeneği işaretleyiniz. Anket, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda anketi uygulayan kişiye, anketi tamamlamadığınızı söylemeniz yeterli olacaktır. Anket sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Derya Yılmaz (E-posta: dderyayilmaz@gmail.com) ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim Soyad Tarih İmza

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APPENDIX B

DEMOGRAPHIC FORM

Kısım I. Bu kısımda sizinle ilgili genel bilgiler sorulmaktadır. Lütfen her bir maddeyi okuyarak, durumunuz en iyi yansıtan seçeneği (X) ile işaretleyiniz.

1. Cinsiyet	☐ Kadın ☐ Erkek
2. Yaş	.....
3. Medeni hali	☐ Evli ☐ Bekar
4. Çocuğunuz var mı?	☐ Evet ☐ Hayır
5. Eşinizin iş durumu	☐ Çalışıyor ☐ Çalışmıyor
6. Görev yaptığınız okul türü	☐ Devlet okulu ☐ Özel okul
7. Okulunuzun hizmet verdiği öğretim düzeyi	☐ İlköğretim ☐ Lise
8. Lise öğretim düzeyi için okul tipi	☐ Düz Lise ☐ Anadolu Lisesi ☐ Endüstri Meslek Lisesi ☐ Ticaret Meslek Lisesi ☐ Kız Meslek Lisesi ☐ Diğer (yazınız) .....
9. Meslekteki yılınız	.....
10. Mesleki durumunuz	☐ Kadrolu öğretmen ☐ Sözleşmeli öğretmen ☐ Vekil öğretmen ☐ Diğer (yazınız) .....
11. Branşınız	.....
12. Okulunuzdaki öğretmen sayısı	.....
13. Okulunuzdaki yaklaşık öğrenci sayısı	.....
14. Şimdiye kadar herhangi idari görevi yürüttünüz mü?	☐ Evet ☐ Hayır (soru 13'e geçiniz)
15. Yürüttüğünüz idari görevler	☐ Müdür ☐ Müdür yardımcısı ☐ Müdür muavini ☐ Diğer (yazınız) .....
16. Şu ana kadar herhangi bir hizmet içi eğitim aldınız mı?	☐ Evet ☐ Hayır
17. Şu ana kadar herhangi bir kurumsal değişim projesinde görev aldınız mı? (Toplam Kalite Yönetimi, müfredat geliştirme, stratejik planlama çalışmaları vb. gibi)	☐ Evet ☐ Hayır

APPENDIX C

FACULTY CHANGE ORIENTATION SCALE (FCOS)

Kısım II. Bu kısımda sizlerin değişime açık olma durumunuza yönelik 19 ifade bulunmaktadır. Değişim, kurumunuzun yapısal ve işlevsel özelliklerinde yapılan herhangi bir farklılığı ifade eder. Bu değişimler Milli Eğitim Bakanlığı'nın tasarlayıp uyguladığı değişimleri (örnek, öğrenci kayıt sisteminde değişim, not giriş sisteminde yapılan değişim, müfredatın içeriğinde yapılan değişim, yönetim süreçlerinin bilgisayar ortamına aktarılması, sizlerin personel özlük durumlarınızdaki değişikler vs.) ve/veya kurumunuzun/okulunuzun tasarlayıp uyguladığı değişimleri (örnek, ailelerle iletişimdeki değişimler, öğrencilere yönelik faaliyetlerin geliştirilmesi, okul binasındaki fiziki değişiklikler vs.) ifade eder. Lütfen her bir ifadeyi okuyarak, **1 (tamamen katılmıyorum)**, **2 (katılmıyorum)** , **3 (kısmen katılmıyorum**), **4 (kısmen katılıyorum), 5 (katılıyorum)** ve **6 (tamamen katılıyorum**) olmak üzere 1'den 6'ya kadar derecelendirilmiş ifadelerden size en uygun seçeneği yuvarlak içine alınız.

		Tamamen Katılmıyorum	Katılmıyorum	Kısmen Katılmıyorum	Kısmen Katılıyorum	Katılıyorum	Tamamen Katılıyorum
1.	Bu okulda, öğretmenler değişimi memnuniyetle karşılar.	1	2	3	4	5	6
2.	Bu okuldaki öğretmenler yeni fikirleri benimser.	1	2	3	4	5	6
3.	Bu okulda, okul müdürü yeni önerilere karşı direnç gösterir.	1	2	3	4	5	6
4.	Bu okulun paydaşları* yenilikleri arzu eder.	1	2	3	4	5	6
5.	Bu okulda, öğretmenler köklü değişikliklere açıktır.	1	2	3	4	5	6
6.	Bu okulda büyük ölçekli değişikliklere karşı direnç gösterilir.	1	2	3	4	5	6
7.	Bu okulun müdürü, değişimi uygulamada yavaş davranır.	1	2	3	4	5	6
8.	Bu okuldaki öğretmenler kural ve uygulamalarla ilgili değişiklikleri isteyerek kabul eder.	1	2	3	4	5	6
9.	Bu okulda, okul müdürü kendini büyük değişiklikleri gerçekleştirmeye adar.	1	2	3	4	5	6
10.	Bu okuldaki öğretmenler küçük değişimler dışındaki bütün değişimleri reddeder.	1	2	3	4	5	6
11.	Bu okulda, okul müdürü velilerden gelen değişim önerilerine genellikle direnç gösterir.	1	2	3	4	5	6
12.	Bu okuldaki müdür, değişim girişimlerini olumlu karşılar.	1	2	3	4	5	6
13.	Bu okulda güçlü bir değişim söylemi vardır, ancak gerçekte değişim neredeyse hiç yoktur.	1	2	3	4	5	6
14.	Bu okulda öğretmenler değişmektense direnç göstermeyi tercih ederler.	1	2	3	4	5	6
15.	Bu okulun öğretmenleri yeniliklerden keyif alır.	1	2	3	4	5	6
16.	Bu okulda, Okul Aile Birliği tarafından yapılan öneriler genellikle değişimle sonuçlanır.	1	2	3	4	5	6
17.	Bu okulda öğretmenler velilerin fikirlerine açıktır.	1	2	3	4	5	6
18.	Bu okulun paydaşlarının çoğu okuldan memnundur.	1	2	3	4	5	6
19.	Bu okulun müdürü değişime açık değildir.	1	2	3	4	5	6

*** Paydaş:** Okulla ilgili doğrudan ve dolaylı kişi ve kuruluşları ifade eder. (Veli, öğrenci, öğretmen, mezunlar, okul çalışanları, Okul Aile Birliği, M.E.B. vb. gibi)

APPENDIX D

TEACHERS' SENSE OF EFFICACY SCALE (TSES)

Kısım III. Bu kısımda sahip olduğunuz öz-yeterlik algınıza yönelik 24 madde bulunmaktadır. Lütfen her bir maddeyi okuyarak, **1 (yetersiz)** ve **9 (çok yeterli)** olmak üzere 1'den 9'a kadar derecelendirilmiş ifadelerden size en uygun seçeneği yuvarlak içine alınız.

	Yetersiz		Çok az yeterli		Biraz yeterli		Oldukça yeterli		Çok yeterli
1. Çalışması zor öğrencilere ulaşmayı ne kadar başarabilirsiniz?	1	2	3	4	5	6	7	8	9
2. Öğrencilerin eleştirel düşünmelerini ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
3. Sınıfta dersi olumsuz yönde etkileyen davranışları kontrol etmeyi ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
4. Derslere az ilgi gösteren öğrencileri motive etmeyi ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
5. Öğrenci davranışlarıyla ilgili beklentilerinizi ne kadar açık ortaya koyabilirsiniz?	1	2	3	4	5	6	7	8	9
6. Öğrencileri okulda başarılı olabileceklerine inandırmayı ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
7. Öğrencilerin zor sorularına ne kadar iyi cevap verebilirsiniz?	1	2	3	4	5	6	7	8	9
8. Sınıfta yapılan etkinliklerin düzenli yürümesini ne kadar iyi sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
9. Öğrencilerin öğrenmeye değer vermelerini ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
10. Öğrettiklerinizin öğrenciler tarafından kavranıp kavranmadığını ne kadar iyi değerlendirebilirsiniz?	1	2	3	4	5	6	7	8	9
11. Öğrencilerinizi iyi bir şekilde değerlendirmesine olanak sağlayacak soruları ne ölçüde hazırlayabilirsiniz?	1	2	3	4	5	6	7	8	9
12. Öğrencilerin yaratıcılığının gelişmesine ne kadar yardımcı olabilirsiniz?	1	2	3	4	5	6	7	8	9
13. Öğrencilerin sınıf kurallarına uymalarını ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
14. Başarısız bir öğrencinin dersi daha iyi anlamasını ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
15. Dersi olumsuz yönde etkileyen ya da derste gürültü yapan öğrencileri ne kadar yatıştırabilirsiniz?	1	2	3	4	5	6	7	8	9
16. Farklı öğrenci gruplarına uygun sınıf yönetim sistemi ne kadar iyi oluşturabilirsiniz?	1	2	3	4	5	6	7	8	9
17. Derslerin her bir öğrencinin seviyesine uygun olmasını ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
18. Farklı değerlendirme yöntemlerini ne kadar kullanabilirsiniz?	1	2	3	4	5	6	7	8	9
19. Birkaç problemli öğrencinin derse zarar vermesini ne kadar iyi engelleyebilirsiniz?	1	2	3	4	5	6	7	8	9
20. Öğrencilerin kafası karıştığında ne kadar alternatif açıklama ya da örnek sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9
21. Sizi hiçe sayan davranışlar gösteren öğrencilerle ne kadar iyi baş edebilirsiniz?	1	2	3	4	5	6	7	8	9
22. Çocuklarının okulda başarılı olmalarına yardımcı olmaları için ailelere ne kadar destek olabilirsiniz?	1	2	3	4	5	6	7	8	9
23. Sınıfta farklı öğretim yöntemlerini ne kadar iyi uygulayabilirsiniz?	1	2	3	4	5	6	7	8	9
24. Çok yetenekli öğrencilere uygun öğrenme ortamını ne kadar sağlayabilirsiniz?	1	2	3	4	5	6	7	8	9

APPENDIX E

CONSENT LETTER OF HUMAN SUBJECTS ETHICS COMMITTEE

1956

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24 Ağustos 2010

Gönderilen: Yrd.Doç.Dr. Yaşar Kondakçı
Eğitim Bilimleri Bölümü

Gönderen : Prof. Dr. Canan Özgen
IAK Başkan Yardımcısı

İlgi : Etik Onayı

"Öğretmenlerin öz-yeterlik algıları ile okullarında örgütsel değişime açık olma durumları arasındaki ilişkinin incelenmesi" başlığı ile yürüttüğünüz çalışmanız "İnsan Araştırmaları Etik Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

24/08/2010

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

APPENDIX F

CONSENT LETTER OF THE INSTITUTION

T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

BÖLÜM : İstatistik Bölümü
SAYI : B.B.08.4.MEM.4.06.00.06–312/40513 06./05/2010
KONU : Araştırma izni
Derya YILMAZ

..... KAYMAKAMLIĞINA
(İlçe Milli Eğitim Müdürlüğü)

İlgi: a) M.E.B. Bağlı Okul ve Kurumlarda Yapılacak Araştırma ve Araştırma Desteğine Yönelik İzin ve Uygulama Yönergesi.
b) MEB EARGED' in araştırma izinlerine ilişkin 11/04/2007 tarih ve 1950 sayılı yazısı.
c) 02/09/2009 tarih ve 74835 sayılı Valilik Onayı.
d) 05/11/2009 tarih ve 98610 sayılı Valilik Onayı.
e) Orta Doğu Teknik Üniversitesinin 28/04/2010 tarih ve 2759 sayılı yazısı.

Orta Doğu Teknik Üniversitesi Eğitim Bilimleri Anabilim Dalı Yüksek Lisans öğrencisi Derya YILMAZ'ın **"Öğretmenlerin öz yeterlilik algıları ve örgütsel değişime açık olma durumları arasındaki ilişkinin incelenmesi."** konulu tez ile ilgili anketi, ek listedeki ilçeniz okullarında uygulama yapılması isteği Müdürlüğümüz Değerlendirme Komisyonunca uygun görülmüştür.

Mühürlü anket örnekleri (3 sayfa) araştırmacıya ulaştırılmış olup, uygulama yapılacak sayıda araştırmacı tarafından çoğaltılarak, araştırmanın ilgi (a) yönerge çerçevesinde **gönüllülük esasına** göre uygulanmasını rica ederim.

Gülçin UYSAL
Vali a.
Müdür Yardımcısı

EKLER :
1-Okul Listesi (3. Sayfa)

DAĞITIM :
Altındağ-Çankaya-Keçiören
Yenimahalle Kaymakamlığı

06/05/2010 VHKİ :A. YILMAZ
06/05/2010 Şef :N. ÇELENK

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APPENDIX G

ADDITIONAL STATISTICAL TABLES

Table 1.
Factor Loadings and Reliabilities of Faculty Change Orientation Scale in Pilot Study

Dimensions	Item Number	Content	Factor Loadings	Cronbach's Alpha (α)	% of Variance
Faculty Openness to Change	2	Faculty in this school embraces new ideas.	.827	.61	29.08
	8	Teachers in this school readily accept changes to new rules and procedures.	.742		
	15	In this school, the faculty relishes innovation.	.696		
	4	This community pushes for innovation.	.689		
	5	In this school, teachers are receptive to substantial changes.	.649		
	1	In this school, faculty welcomes change.	.618		
	10	Faculty in this school rejects all but minimal changes.	-.500		
Principal Openness to Change	3	In this school, the principal balks at new suggestions.	.839	.67	12.51
	6	In this school major change is resisted.	.656		
	7	In this school, the principal is slow to change.	.655		
	14	Faculty in this school would rather fight than switch.	.530		
	13	The rhetoric of change in this school is strong, but actual change is negligible.	.442		
	11	In this school, the principal is often resists changes suggested by parents.	.397		
	19	In this school, the principal is committed no change.	.375		
Community Pressure for Change	18	Most community members are happy with their schools.	.762	.70	11.36
	16	In this school, suggestions by the Parent Teacher Association often produce change.	.643		
	17	Faculty in this school is open to ideas of the parents.	575		
	9	In this school, the principal is committed to major change.	.476		
	12	The principal in this school embraces change initiatives.	.452		

Table 2.
Factor Loadings and Reliabilities of Faculty Change Orientation Scale

Dimensions	Item Number	Content	Factor Loadings	Cronbach's Alpha (α)	% of Variance
Faculty Openness to Change	2	Faculty in this school embraces new ideas.	.915	.87	41.12
	1	In this school, faculty welcomes change.	.883		
	5	In this school, teachers are receptive to substantial changes.	.660		
	15	In this school, the faculty relishes innovation.	.593		
	8	Teachers in this school readily accept changes to new rules and procedures.	.566		
	10	Faculty in this school rejects all but minimal changes.	.346		
Principal Openness to Change	7	In this school, the principal is slow to change.	.765	.79	12.67
	3	In this school, the principal balks at new suggestions.	.711		
	19	In this school, the principal is committed no change.	.680		
	11	In this school, the principal is often resists changes suggested by parents.	.556		
Community Pressure for Change	17	Faculty in this school is open to ideas of the parents.	.610	.67	7.90
	16	In this school, suggestions by the Parent Teacher Association often produce change.	.575		
	18	Most community members are happy with their schools.	.492		