THE MEDIATING ROLE OF TEACHER AGENCY ON THE RELATIONSHIP BETWEEN JOB SATISFACTION AND READINESS FOR CHANGE AMONG PUBLIC SCHOOL TEACHERS

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ABSTRACT

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Readiness for change is vital for the success of any educational change initiative, and that is why there has been an increasing interest in the antecedents of readiness for change. However, there is a limited body of empirical research that sheds light on the role of teacher agency on readiness for change. Moreover, the influence of job satisfaction on readiness for change has remained unclear. Therefore, this study set out to investigate whether teacher agency mediates the relationship between job satisfaction and readiness for change.

For this purpose, the study was designed as a correlational study, and participants of the study involved 672 teachers working at primary, secondary, and high school level public schools. The data were collected with convenience sampling through self-administered online and paper-and-pencil formats of the Job Satisfaction Scale, Teacher Agency Scale, and Readiness for Change Scale.

Partial least square structural equation modeling (PLS-SEM) was used to test the hypothesized model by applying the disjoint two-stage approach. The results indicated that both job satisfaction and teacher agency were significant predictors of readiness for change, and teacher agency mediated the relationship between job satisfaction and readiness for change. This study, therefore, is expected to be of value to researchers, school principals, and policymakers wishing to increase the likelihood of change success.

Keywords: Educational Change, Readiness for Change, Teacher Agency, Job Satisfaction

ÖZ

DEVLET OKULLARINDA ÇALIŞAN ÖĞRETMENLERİN
İŞ DOYUMLARI VE DEĞİŞİME HAZIR OLMA DURUMLARI ARASINDAKİ
İLİŞKİDE ÖĞRETMEN FAİLLİĞİNİN ARACILIK ROLÜ

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Değişime hazır olma, herhangi bir eğitimsel değişim girişiminin başarısı için çok büyük öneme sahiptir ve bu nedenle değişime hazır olmanın öncüllerine alan yazında artan bir ilgi vardır. Ancak, sınırlı sayıda araştırma, öğretmen failliğinin değişime hazır olma üzerindeki rolüne ışık tutmaktadır. Ayrıca, iş doyumu ile değişime hazır olma arasındaki ilişki belirsizliğini korumaktadır. Bu nedenle, bu çalışma, bahsedilen ilişkileri incelemenin yanı sıra öğretmen failliğinin, iş tatmini ile değişime hazır olma arasındaki ilişkiye aracılık edip etmediğini araştırmayı amaçlamaktadır.

Bu amaç doğrultusunda, bu kesitsel çalışma bir ilişkisel model olarak desenlenmiştir ve araştırmanın katılımcılarını ilkokul, ortaokul ve lise düzeyindeki devlet okullarında görev yapan 672 öğretmen oluşturmaktadır. Veriler, öz bildirime dayalı İş Doyumu Ölçeği, Öğretmen Failliği Ölçeği ve Değişime Hazır Olma Ölçeği'nin çevrim içi ve kağıt-kalem formatları aracılığıyla kolayda örnekleme yoluyla toplanmıştır.

Ayrık iki aşamalı yaklaşım ile kısmi en küçük kareler yapısal eşitlik modellemesi uygulanarak çalışmanın kavramsal modeline yönelik analizler gerçekleştirilmiştir. Araştırmanın sonuçları, iş doyumu ile öğretmen failliğinin değişime hazır olmayı yordayan değişkenler olduğunu ve iş doyumu ile değişime hazır olma arasındaki ilişkide öğretmenlik failliğinin aracılık rolünün bulunduğunu göstermiştir. Bu bulguların eğitim örgütlerinde değişim girişimlerinin başarısını artırmak isteyen araştırmacılar, okul yöneticileri ve karar alıcılar için değerli olması beklenmektedir.

Anahtar Kelimeler: Eğitimde Değişim, Değişime Hazır Olma, Öğretmen Failliği, İş Doyumu

To my parents

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TABLE OF CONTENTS

PLAGIARISM iii
ABSTRACT iv
ÖZ vi
DEDICATION viii
ACKNOWLEDGMENTS ix
TABLE OF CONTENTS x
LIST OF TABLES xiv
LIST OF FIGURES xv
LIST OF ABBREVIATIONS xvi
CHAPTERS
1. INTRODUCTION 1
1.1 Background of the Study 1
1.2 Context of the Study 5
1.3 Purpose of the Study 8
1.4 Significance of the Study 8
1.5 Definitions of Terms 10
2. LITERATURE REVIEW 12
2.1 Organizational Change 12
2.2 Attitudes Toward Change 15
2.2.1 Negative Attitudes Toward Change 15
2.2.2 Positive Attitudes Toward Change 16
2.2.3 Readiness for Change 18
2.2.3.1 Predictors of Readiness for Change 19
2.2.3.1.1 Content Factors 19
2.2.3.1.2 Context Factors 20

2.2.3.1.3 Process Factors 21
2.2.3.1.4 Individual Factors 22
2.3 Job Satisfaction 23
2.3.1 Job Satisfaction and Organizational Change 24
2.4 Agency 26
2.4.1 Teacher Agency 29
2.4.1.1 Teacher Agency and Educational Change 33
2.5 Summary of the Literature Review 37
3. METHOD 40
3.1 Design of the Study 40
3.2 Sampling Procedure 41
3.3 Demographic Characteristics of the Participants 41
3.4 Instruments 42
3.4.1 Demographic Information Form 44
3.4.2 Job Satisfaction Scale 44
3.4.3 Teacher Agency Scale 44
3.4.4 Readiness for Change Scale 45
3.5 Data Collection Procedure 46
3.6 Data Analysis 48
3.6.1 Partial Least Square Structural Equation Modeling 48
3.6.1.1 Disjoint Two-Stage Approach 50
3.6.1.2 Measurement Model Specification 53
3.6.1.3 Model Assessment 54
3.6.1.3.1 Assessment of Measurement Model 54
3.6.1.3.2 Assessment of Structural Model 56
3.6.1.3.3 Mediation Analysis 56
3.7 Limitations of the Study 58

4. RESULTS 61
4.1 Preliminary Analyses 61
4.1.1 Data Screening 61
4.1.2 Missing Value Analysis 64
4.1.3 Outlier Analysis 64
4.1.4 Normality 65
4.1.5 Differences in Study Variables Explained by the Grouping Variables 65
4.1.6 Common Method Bias 69
4.2 Descriptive Statistics Results 69
4.3 Structural Equation Modelling 71
4.3.1 Confirmatory Tetrad Analysis 71
4.3.2 Confirmatory Composite Analysis 72
4.3.2.1 Assessment of First-order Reflective Measurement Model 72
4.3.2.2 Assessment of Second-Order Formative Measurement Model 77
4.3.3 Assessment of Structural Model 79
4.3.3.1 Predictive Capability of the Structural Model 80
4.3.3.2 Hypothesis Testing 80
4.4 Summary of the Results 82
5. DISCUSSION 84
5.1 Discussion of the Results 84
5.2 Implications for Practice 88
5.3 Recommendations for Future Research 91
REFERENCES 93
APPENDICES
A. APPROVAL OF METU HUMAN SUBJECTS ETHICS COMMITTEE 116
B. APPROVAL OF ISTANBUL PROVINCIAL DIRECTORATE OF NATIONAL EDUCATION 117
C. INFORMED CONSENT FORM 118

D. PERMISSION TO USE TEACHER AGENCY SCALE 119
E. PERMISSION TO USE READINESS FOR CHANGE SCALE 120
F. PERMISSION TO USE JOB SATISFACTION SCALE 121
G. DEMOGRAPHIC INFORMATION FORM 122
H. SAMPLE ITEMS FROM TEACHER AGENCY SCALE 123
I. SAMPLE ITEMS FROM READINESS FOR CHANGE SCALE 124
J. SAMPLE ITEMS FROM JOB SATISFACTION SCALE 125
K. TURKISH SUMMARY / TÜRKÇE ÖZET 126
L. THESIS PERMISSION FORM / TEZ İZİN FORMU 145

LIST OF TABLES

Table 3.1 Demographic Characteristics of the Participants 43
Table 4. 1 Means, Standard Deviations, Skewness and Kurtosis Values for Items 66
Table 4. 2 Mann-Whitney U Test Results 67
Table 4. 3 Kruskal-Wallis Test Results 68
Table 4. 4 Dunn's Test Results 68
Table 4. 5 Descriptive Statistics for Job Satisfaction Scale, Teacher Agency Scale, and Readiness for Change Scale 69
Table 4. 6 Assessment of Reflective Measurement Model 73
Table 4. 7 Bivariate Correlations among Study Variables and Results of Discriminant Analysis Using Fornell-Larcker Criterion 75
Table 4. 8 Cross Loadings of Measurement Items 75
Table 4. 9 Heterotrait-Monotrait Ratio of Correlation between Pairs of First-Order Constructs 77
Table 4. 10 Variance Inflation Factor of Second-order Constructs 78
Table 4. 11 Formative Constructs' Outer Weights Significance Testing Results 79
Table 4. 12 Model and Path Coefficients Assessment 81

LIST OF FIGURES

Figure 2. 1. The model portraying the achievement of agency 28
Figure 3. 1. The first stage of disjoint two-stage approach 52
Figure 3. 2. The second stage of the disjoint two-stage approach and the conceptual model of the study 52
Figure 3. 3. A three-variable mediation model 57
Figure 3. 4. Decision tree for establishing types of mediation and nonmediation 57
Figure 4. 1. Assumption of similar distribution for the Mann-Whitney U test 63

LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CCA	Confirmatory Composite Analysis
CE	Constructive Engagement
CFI	Comparative Fit Index
CI	Confidence Interval
Cog.RFC	Cognitive Readiness for Change
CR	Composite Reliability
CTA	Confirmatory Tetrad Analysis
Emo.RFC	Emotional Readiness for Change
HTMT	Heterotrait-Monotrait Ratio
Int.RFC	Intentional Readiness for Change
JS	Job Satisfaction
LE	Learning Effectiveness
M	Mean
ML	Maximum Likelihood
MoNE	Ministry of National Education
NNFI	Non-Normed Fit Index
O	Optimism
OECD	Organization for Economic Co-operation and Development
RFC	Readiness for Change
RMSEA	Root Mean Square of Error Approximation
SD	Standard Deviation
SE	Standard Error
TA	Teacher Agency
TE	Teaching Effectiveness
TES	Turkish Educational System
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Our world has constantly been changing since its existence. The change concept is so vital that numerous species have gone extinct because they could not adapt to the changes in their environment. Even though humankind has left behind most of the survival anxieties for itself, we are apprehensive about our organizations that are set up on an assumption of continuity but under a threat of a rapidly changing environment (Burke, 2008). For this reason, necessary actions are frequently needed in organizations to increase their competitiveness and effectiveness, improve their services' quality, and make them survive.

In the broadest sense, organizational change is defined as any alteration in organizational composition, structure, or behavior to shift an organization's existing state to some desired state (Bowditch & Buono, 2001; Pettigrew, 1990). Many external and internal forces, including societal and political forces such as privatization, competition in the market, employee discontent and conflict oblige organizations to change (Mills, Dye & Mills, 2009). Educational organizations are also subject to forces and trends, such as international assessment and comparison programs (e.g., PISA), the internationalization of education, the STEM movements, and changes in labor markets, technology, and laws and regulations, that force them to change accordingly to remain relevant and effective (Kondakci, 2020; Lunenburg, 2010). However, change initiatives mostly end up with failure or limited success (George, White, & Schlaffer, 2007), and unsuccessful change movements may cause many adverse financial and human outcomes for the organizations, such as a decrease in organization effectiveness, loss of time, cynicism, and low employee morale (Beer & Nohria, 2000;

Claiborne, Auerbach, Lawrence, & Schudrich, 2013; Whelan-Berry, Gordon & Hinings, 2003). In the literature, many reasons for failure in change movements have been revealed, such as poor change management (Probst & Raisch, 2005), change fatigue (Clegg & Walsh, 2004; Willis, McGraw, & Graham, 2019), and the permeated culture and climate in the organization (McNabb & Sepic, 1995). Additionally, many scholars have pointed out that one of the main reasons for unsuccessful change efforts is overconcentrating on the technical side of the change (e.g., new technologies, techniques, and tools) while underestimating the critical role of individuals in the organizations (Armenakis, Harris, & Mossholder, 1993; George & Jones, 2001; Greenhalgh, Robert, Macfarlane, Bate & Kyriakidou, 2004).

Even if the organizational change is inevitable and necessary, it can be perceived as a threat by the employees (Luhmann, 1979) because change initiatives mostly posit an unfamiliar and uncertain situation (Burke, 2008) and force them to arrange their professional identities (Vähäsantanen & Eteläpelto, 2009). Therefore, organizations should find ways for their employees to develop positive attitudes towards change to increase the likelihood of change efforts (Choi, 2011). Similarly, Miller, Johnson, and Grau (1994) argued that many factors affect change movements' success, but few are crucial as employees' attitudes for change. A considerable amount of literature has been published on attitudes towards change, and the most studied constructs are commitment to change, openness to change, cynicism about the change, and readiness for change (Choi, 2011). Although those constructs bear a resemblance to each other, they have different meanings and focuses. Among them, readiness for change has played an important role in the change literature (Holt, Armenakis, Harris, & Field, 2007) because it is considered to be a critical "precursor for change" (Armenakis et al., 1993, p. 681). Importance of the readiness can be better understood with Weiner's (2009) assertion that half of the change movements fail because of the failure to create adequate readiness.

Two approaches exist in the literature regarding the definition of readiness for change, either structural or psychological (Weiner, Amick, & Lee, 2008). The structural definitions emphasize organizations' capabilities and resources that are accepted as

indicators of readiness. In contrast, psychological definitions, which are the most accepted in the literature, emphasize organizational members' psychological states for readiness. Armenakis et al. (1993) conceived a commonly held definition for readiness for change as "organizational members' beliefs, attitudes and intentions regarding the extent to which changes are needed and the organization's capacity to successfully make those changes" (p. 681). However, Rafferty, Jimmieson, and Armenakis (2013) claimed that this definition is deficient because it ignores emotions. Thus, they brought a definition to the forefront done by Holt, Armenakis, Field, and Harris (2007, p. 235) that acknowledges readiness for change as "the extent to which an individual or individuals are cognitively and emotionally inclined to accept, embrace, and adopt a particular plan to purposefully alter the status quo." This revised definition not only covers individuals' cognitions (i.e., what they think) but emphasizes the importance of affect (i.e., how they feel) and behaviors (i.e., what they intend to do). Therefore, this three-dimensional construct reflects the complexity and multidimensionality of the readiness for change. Also, Bouckenooghe and Devos (2007) assert that this multidimensional approach offers a complete understanding for investigating the relationships between readiness for change and its antecedents.

Change initiatives in educational systems mostly cover new approaches for enhancing student learning and aim for teachers' professional development and school improvement. Thus, rather than teachers being isolated from their colleagues and reluctant to follow changes and developments in the field, teachers who take an active role in the change process and take the initiative are needed as change agents (Bellibaş, Çalışkan, & Gümüş, 2019; Fullan, 1993). Therefore, teacher agency that is defined by Toom, Pyhältö, and O'Connell Rust (2015 p. 616) as the "willingness to act according to professional values, beliefs, goals, and knowledge in the differing contexts and situations that teachers face in their classrooms and outside them" can be considered as a related factor with their attitudes toward change. Although there are studies reported that "agency and change are seen as synonymous and positive" (Priestley, Edwards, Priestley, & Miller, 2012, p. 191), there is also research suggesting that teachers exert their agency not only to support the initiatives but also to criticize and even resist them (Sannino, 2010; Vähäsantanen, & Eteläpelto, 2009). Therefore, even

though the centralized educational systems exclude teachers in change initiatives as is the case in Turkey, teachers as the operating core of educational systems (Lunenburg, 2012) play an important role as the agents of change by "either actively engaging with reform agendas, passively accepting them, or rejecting them" (Datnow, 2012, p. 194).

The teacher agency conceptualization of Liu, Hallinger, and Feng (2016) acknowledges agency as something more like teachers' capacity and postulates four dimensions for this construct: learning effectiveness (i.e., beliefs about professional learning), teaching effectiveness (i.e., beliefs about having the ability to reach educational goals regardless of factors related to the students), optimism (i.e., beliefs about the possibility of future success) and constructive engagement (i.e., using professional influence in an effort to achieve the objectives). Besides, Priestley, Biesta, and Robinson's (2015a) ecological perspective conceive teacher agency as a phenomenon that emerges from the interaction between their capacities and contextual conditions, rather than solely as a capacity that people have or not. Authors also indicate that the degree of agency that people enact toward a situation is temporal and influenced to varying degrees by their past, orientations towards the future, and engagement with the present. Considering these approaches towards teacher agency, job satisfaction, which is the positive emotional state resulting from the accordance between expectations from and outcomes of the job (Locke, 1976), can be proposed as a relevant construct with teacher agency in addition to the other personal and contextual factors such as trust (Oolbekkink-Marchand, Hadar, Smith, Helleve, & Ulvik, 2017), teacher beliefs (Priestley et al., 2015a), knowledge of curriculum and pedagogy (Sloan, 2006), and personal goals (Ketelaar, Beijaard, Boshuizen, & Den Brok, 2012). A reciprocal relationship between teacher agency and job satisfaction has been revealed in the literature. For example, Priestley et al. (2015a) asserted that having a sense of agency evokes teachers to consider their profession meaningful, while Van der Heijden, Geldens, Beijaard, and Popeijus (2015) revealed that teachers who are passionate about their profession and enjoy being a teacher are more likely to be active agents of change.

Although the previous studies that established a positive relationship between job satisfaction and attitudes toward change, such as change acceptance (Iverson, 1996; Wanberg & Banas, 2000), commitment to change (Devos, Van der Heyden, and Van den Broeck, 2002), change cynicism (Polat & Gungor, 2014), and readiness for change (Kondakci, Beycioglu, Sincar, & Ugurlu, 2017; McNabb & Sepic, 1995), and investigated the relationship between agency and attitudes towards change (Sannino, 2010), those studies mostly focused on the direct relationship between antecedents and change related reactions (Van Dam, Oreg, & Schyns, 2008). However, there may be a more complex mechanism between these variables in such a way that teachers' satisfaction with their profession may influence their attitudes toward change through their sense of agency. In other words, teachers with high job satisfaction may be more likely to have a sense of agency (Van der Heijden et al., 2015), which, in turn, may make them more ready to enact the proposed changes. Therefore, the aim of the present study is to examine how teachers' job satisfaction and sense of agency interact to influence their readiness toward proposed changes.

1.2 Context of the Study

The following section aims to introduce what the term "change" will be used for in this study, and the context in which the study takes place by summarizing the previous and current issues in Turkish education system (TES).

Ministry of National Education (MoNE) is responsible for all educational-related activities and decisions in TES, making it one of the most centralized education systems among OECD countries (Duyar, Gumus, & Bellibas, 2013; Fretwell & Wheeler, 2001; Zayim & Kondakci, 2015). As the largest school system in Europe with about 54,000 schools, 1 million teachers, and more than 16 million students, TES adopted a so-called 4+4+4 model that reflects the three levels of compulsory education (Kitchen, Bethell, Fordham, Henderson, & Li, 2019). At the primary education level, there are four-year and compulsory primary schools without Imam and Preacher school option and four year and compulsory lower secondary schools with Imam and Preacher school option. The secondary education level, which is also four-year and compulsory, includes seven different types of high schools, namely Anatolian High

Schools, Anatolian Vocational and Technical High Schools, Anatolian Imam and Preacher High Schools, Multi-Program Anatolian High Schools, Science High Schools, Social Sciences High Schools, and Anatolian Fine Arts High Schools (sorted descending by the number of schools) (Kitchen et al., 2019). MoNE frequently initiates change movements, making TES one of the most vibrant educational systems in the world (Kondakci, Orucu, Oguz, & Beycioglu, 2019). Gökçe (2018) studied the changes made in TES between 2000 and 2017 and classified them into four. Firstly, structural changes made in national education organizations were stated as the changes in the mission, reduction in numbers of ministry's units, and changes in the way of appointments of executives of MoNE. Secondly, structural changes towards the school system were indicated as the conversion of school types, increasing the duration of compulsory education, introducing new elective courses, and alterations in the high-stake exams. The third category of changes was stated as the changes towards the ways of appointment and assignment of school principals. She pointed out that there were thirteen changes made toward the appointment of principals between 2000 and 2017. The last category of change that TES has experienced recently is the structural changes towards the teaching profession, such as changes in appointment and teacher training programs, abolishing teacher candidate procedures, and employment of contracted teachers.

As usual and frequent in change initiatives, debates accompany with change movement in TES as well. According to Aksit (2007), curricular changes launched in 2005 were criticized by NGOs, faculties of education, and education unions because the change process was rushed and imposed by top executers without working through it with stakeholders; the faculties of education were excluded during the process, and the outcomes of piloting process were not announced and discussed. In addition, Kondakci et al. (2019) investigated school principals' perceptions of large-scale change initiatives in Turkey. The results showed common problems of change movements in TES. Firstly, although principals agreed that there is a need for change, they argue that the change initiatives do not target issues in TES, and they do not consider the specific needs of different parts of the country. Moreover, principals asserted that the conceptual and philosophical bases of the change had not been

constructed or conveyed. Therefore, principals had to implement the changes that they believe they are wrong, and this caused role confusion. Secondly, it was revealed in the study that principals perceived change interventions as political practices that political parties will benefit from. Thirdly, some problems with change design and implementation such as "lack of planning, failing to envisage necessary infrastructure for successful change, lack of change implementation blueprint and lack of piloting" (p. 308) damaged participants' positive attitudes towards change. Furthermore, teachers and principals have not been incorporated in the stages of change about design and implementation. Finally, the study showed that school principals perceived frequent and fast pace of change as problematic because they caused a lack of piloting process, implementing not data-driven change, and missing out some stages of change. Therefore, most of the change initiatives have not been able to be sustained.

As the latest change movement, MoNE introduced the 2023 Education Vision document in 2018 that contains 44 goals under 18 titles that envisage radical and massive changes in TES. Some examples of these changes can be redefining national education's mission, reorganizing management strategies, adopting new measurement and evaluation strategies, diversifying school financing methods, and changes in the curriculum of all types of primary and secondary schools (MoNE, 2018).

Doğan (2019) investigated principals' and teachers' views regarding the 2023 Education Vision document. Results showed that more participants in the study have positive opinions on this change initiative than those with negative views or who are doubtful. The ones supporting the Education Vision 2023 stated that the projected changes are inclusive, qualified, hopeful, and considering all stakeholders. On the other hand, those with negative views about Vision 2023 expressed that the goals are abstract, too general, hard to apply, unconvincing, and not having an appropriate infrastructure to reach the desired goals. Additionally, Semerci et al. (2020) investigated academicians' opinions who work in education faculties on vision document. The results showed that academicians found the document appropriate in terms of its educational philosophy, valuable knowledge, skills and values it offers, and problems of the 21st century it addresses.

Even if the Education Vision 2023 document seems to have won approval from some stakeholders, it can be proposed that whether the desired results will be obtained mostly depends on teachers' cognitive, affective and intentional states, such as their job satisfaction, agency, and readiness levels.

1.3 Purpose of the Study

Based on this discussion, this research set out to investigate the relationship between job satisfaction, teacher agency, and readiness for change, and the meditating role of teacher agency on the relationship between job satisfaction and readiness for change. With the proposed model in this study, in which readiness for change being the outcome variable, the teacher agency being the mediating variable, and job satisfaction being the predictor variable, we sought to answer the following research question:

What is the role of teacher agency in the relationship between job satisfaction and readiness for change among public school teachers in Turkey?

The specific hypotheses drove the research are:

Hypothesis 1: There is a significant and positive association between job satisfaction and readiness for change.

Hypothesis 2: There is a significant and positive association between job satisfaction and teacher agency.

Hypothesis 3: There is a significant and positive association between teacher agency and readiness for change.

Hypothesis 4: Teacher agency mediates the relationship between job satisfaction and readiness for change.

1.4 Significance of the Study

As stated in the previous section, many organizational change movements fail due to overconcentrating on technical aspects and overlooking the individual aspects (Çalışkan & Gökalp, 2020). Similarly, despite the widespread understanding of the critical role of readiness for change for the success of educational change movements

(Çalık & Er, 2014; Demirtaş, 2012), the issue of teachers' readiness for change has been under-researched in the literature (Kesik & Aslan, 2020). Therefore, this study is expected to add value to educational change literature in some ways by revealing or reaffirming the relationship between job satisfaction, teacher agency, and readiness for change.

A relatively small body of literature has concerned with the antecedents of readiness for change (Rafferty et al., 2013), and most of them have focused on the direct relationship between them (Van Dam, Oreg, & Schyns, 2008). When antecedents of readiness are analyzed, personality traits draw attention as the most studied constructs in the literature (Vakola, Armenakis, & Oreg, 2013). Furthermore, thus far, research regarding the antecedents of readiness for change has overlooked the emotions while concentrating on the cognitions and beliefs (Rafferty et al., 2013). Therefore, this study is expected to have significant contributions to the field by revealing an indirect association between readiness for change and job satisfaction, which is an emotional state, through a mediator variable, teacher agency, which has cognitive, emotional, and behavioral dimensions. Also, job satisfaction has been mostly investigated in the literature as an outcome variable of reaction to change instead of a predictor variable (Zayim Kurtay & Kondakci, 2019), and the relationship between job satisfaction and attitudes toward change is still ambiguous (Claiborne, Auerbach, Lawrence, & Schudrich, 2013; Vakola, 2014). By identifying job satisfaction as a predictor variable of readiness for change, this study will provide empirical support to the limited studies designed in this way in the literature.

As mentioned before, teachers enact agency in many ways in their professional lives; however, there is little evidence of the role of teacher agency in educational change initiatives (Pantić, 2015). Similarly, Priestley et al. (2012) claimed that the concept of teacher agency undertheorized and even misconceived in the educational change literature. Therefore, the findings of this thesis have the potential to make an important contribution to educational change literature by demonstrating the link between teacher agency and readiness for change. Also, the present study's findings may

provide practical implications for school administrators and policymakers to increase readiness levels of teachers through teachers' job satisfaction and agency levels.

In addition, this study appears to be one of the first studies investigating teacher agency in the Turkish context. To the best of the researcher knowledge, there has been published only a doctoral dissertation (Gülmez, 2019) and a few articles (e.g., Bellibaş, Çalışkan, & Gümüş, 2021; Bellibaş, Polatcan, & Kılınç, 2020; Polatcan, 2021) on the concept of teacher agency in Turkey before this study. Thus, this thesis is hoped to evoke curiosity and stimulate Turkish researchers' interest in teacher agency. Additionally, improving the understanding of teacher agency becomes more of an important issue to have teachers who take active roles in change initiatives (Bellibaş, Çalışkan, & Gümüş, 2019). Therefore, this study may help policymakers establish strategies and policies and create momentum for future change movements by identifying the relationship between agency, job satisfaction, and readiness for change.

1.5 Definitions of Terms

Definitions for the variables of the study are presented below.

Readiness for change refers to "organizational members' beliefs, attitudes, and intentions regarding the extent to which changes are needed and the organization's capacity to successfully make those changes" (Armenakis et al., 1993, p. 681).

Cognitive readiness for change refers to "the beliefs and thoughts organizational members hold about the outcomes of change" (Bouckenooghe, Devos, & Van Den Broeck, 2009, p. 576).

Emotional readiness for change refers to the organizational members' "feelings about a specific change project being introduced" (Bouckenooghe et al., 2009, p. 576).

Intentional readiness for change refers to the "the effort and energy organizational members are willing to invest in the change process" (Bouckenooghe et al., 2009, p. 576).

Teacher agency refers to "teacher's initiative, motivation, and drive to engage in proactive efforts to contribute to school development" (Liu, et al., 2016, p. 81).

Learning effectiveness refers to "teachers' beliefs about their motivation, ability, and persistence as learners in an environment of collegial exchange (Liu et al., 2016, p. 81).

Teaching effectiveness refers to "teacher beliefs about their ability to work effectively with different types of pupils and achieve their goals in the classroom (Liu et al., 2016, p. 81).

Optimism refers to "teachers' attitudes toward colleagues and the likelihood of future success (Liu et al., 2016, p. 81).

Constructive engagement refers to "teacher attitudes towards their own efforts to engage in learning and expand their professional influence within the school (Liu et al., 2016, p. 81).

Job satisfaction refers to "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1304).

CHAPTER 2

LITERATURE REVIEW

This chapter aims to provide a review of literature related to the variables of the present study: readiness for change, teacher agency, and job satisfaction. In the first section, the prevalent lenses for analyzing organizational change are briefly explained. Subsequently, literature regarding employees' attitudes toward change with more emphasis on readiness for change, which is the outcome variable of the study, is briefly outlined. The third section presents definitions for job satisfaction and literature findings regarding its antecedents and outcomes, followed by demonstrating how this concept has been addressed in the change literature. The fourth section introduces the definitions of the agency concept and approaches toward it in the literature. After that, different conceptualizations of teacher agency found in the literature and how teacher agency has been discussed in the organizational change literature are reviewed. Furthermore, a summary of the literature review is presented at the end of the chapter.

2.1 Organizational Change

Organizational change can be considered as any alteration in an organization's design, structure, or practices (Bowditch & Buono, 2001) to move from an existing state to a more desirable state to survive, preserve the current position, or grow in a continuously changing and becoming more competitive world (Burke, 2008; Pettigrew, 1990). Because organizational change is an extremely complex concept, it has been conceptualized through different lenses in the literature, namely order of change, nature of change, level of change, and intentionality of change.

Order of change indicates how radical or fundamental the changes are (Seo, Putnam, & Bartunek, 2004). While the first-order changes consist of minor and predictable improvements and adjustments that do not change an organization's core, paradigm,

or schemata but the everyday practices, the second-order changes seek to change these elements (Bartunek & Moch, 1987; Seo et al., 2004). Hubers (2020) exemplified first- and second-order changes in the educational context. According to her, a teacher's preference to utilize collaborative activities in the curriculum can be classified as a first-order change while implementing data-based decision making, new technologies, or inquiry-based learning that results in transformational change in a school organization can be regarded as a second-order change. The organizational change literature revealed that the second-order changes are much more likely than the first-order changes to conflict with organizational members' interests (Bartunek & Moch, 1987) and challenge their existing skills and knowledge (Hubers, 2020; Yuan & Woodman, 2007). For these reasons, the second-order changes are generally perceived as uncertainty and sometimes threats by the members, which in turn cause resistance to the changes by them (Devos, Buelens, & Bouckenooghe, 2007).

In the organizational change literature, another popular lens in explaining change is the *nature of change* that is related to the scale and pace of a change (Greenwood & Hinings,1996; Porras & Silvers, 1991). For instance, the punctuate equilibrium model of organizational transformation explains how organizations generally undergo fundamental changes (e.g., Gersick, 1991; Tushman & Romanelli, 1985). According to this model, small adjustments, which correspond to evolutionary changes, are made in an organization to maintain the current state or steady growth. However, some internal and external forces may punctuate the evolutionary period by creating a sense of crisis or a need for change. These turbulent times often oblige organizations to make more radical changes called revolutionary changes, such as changing management practices, finding new practices, or adopting a new mission. In the change literature, most of the changes are regarded as evolutionary, and it is commonly acknowledged that revolutionary changes result in more negative attitudes toward change by organizational members and less success in changes (Burke, 2008).

Considering that organizations consist of smaller units that are interacting with each other, organizational change can be conceptualized by taking into account the *level* at which the change is initiated. Accordingly, individual, group and organizational levels

of change have been offered in the change literature. Most of the individual level changes try to alter organizational members' behaviors, attitudes, and perceptions while keeping the organization's direction the same (Mills et al., 2009). Recruitment, selection, replacement, and displacement; training and development; and coaching and counseling can be given as examples of the change practices at the individual level to promote organizational change (Burke, 2008). Sometimes, however, changes are implemented within a working group or between working groups to increase an organization's effectiveness. These group level changes mostly transform the work process by altering the job routines, models, and values that shape group members' actions (Mills et al., 2009; Whelan-Berry, et al., 2003). Finally, at the level of organizational change, the aims are usually to restructure and reorganize the whole system (Mills et al., 2009). In the literature, it is argued that these changes are caused either by the interactions between subsystems that form the organizations or by the interactions between the organizations and their external environment (Stickland, 1998). However, examining organizational change by considering these three levels has been considered inadequate because organizations have more complex relationship levels (e.g., interpersonal, intergroup, and inter-organizational). Still, the three change levels explained above are useful to analyze organizational change (Burke, 2008) and simultaneous change efforts at the organizational, group, and individual levels are frequently observed in change interventions.

The i*ntentionality of change* that refers to the extent to which change is controlled is another lens in the organizational change literature to distinguish the changes (Poole, 2004). According to Porras and Robertson (1992), the changes can be considered either planned or unplanned. Planned changes are made deliberately to close the gap between the current state and the desired state; on the contrary, unplanned changes may occur without an organization's choice, mostly when unexpected forces oblige organizations to take extemporary actions (Burke, 2008; Poole, 2004). In the literature, unplanned changes are regarded as causing more undesired results than the planned changes.

Having briefly summarized how organizational change is defined and classified in the literature, the following section addresses the literature regarding organizational members' attitudes toward change.

2.2 Attitudes Toward Change

It is widely acknowledged in the literature that the vast majority of change movements neither achieve intended goals nor bring about lasting change (Beer & Nohria, 2000; Clegg & Walsh, 2004) because of underestimating the role of individuals during the process (Armenakis, et al., 1993). However, organizational change is possible only if individuals in organizations change and act accordingly with the change (Whelan-Berry et al., 2003). This situation was emphasized by Schneider, Brief, and Guzzo (1996, p. 7) as "If people do not change, there is no organizational change." By locating individuals at the center of organizational change, many attitudinal constructs, either positive or negative, have been offered in the literature to investigate employees' support for organizational change.

2.2.1 Negative Attitudes Toward Change

A critical factor influencing the success or failure of change depends on whether organizational members develop negative attitudes toward change (Clegg & Walsh, 2004). Two of the widely studied negative attitudes toward change are explained below.

Cynicism about change can be defined as being pessimistic about the success of a change initiative (Wanous, Reichers, & Austin, 2000). Wanous and his colleagues argued that this kind of pessimism might originate from previous unsuccessful change attempts, a lack of confidence in management in terms of management's motivation, competency, or both, and excluding organization members from the decision-making process before change is initiated. In addition, Qian and Daniels (2008) revealed that receiving timely and quality information about change decreased cynicism about change. They also showed in their study that resistance to change arises when cynicism about change is prevalent among the organization members.

Because change can be perceived as a decline in job security, notable changes in working conditions, threats toward job status, and conflicting with self-interests, people might react to the change to delay its beginning, block its implementation, or maintain the current situation (Armenakis & Bedeian, 1999; Bouckenooghe, 2010; Dawson, 1994). This attitude has been defined as resistance to change and considered a continuum that ranges between apathy, which indicates indifference about change, and aggressive resistance expressed by destructive behaviors (e.g., mistakes made on purpose, sabotage) (Coetsee, 1999). Clegg and Walsh (2007) contended that people prompt resistance mostly due to the desire to exert some control over proposed changes. In connection with this, Kirkpatrick (1985) posited a negative correlation between participation in the decision-making process about change and resistance to change. Still, it is also worth noting that lack of resistance to change does not come to mean that members have positive attitudes toward change (Armenakis et al., 1993). Actually, the traditional paradigm in change literature considers resistance as an impediment to change success that should be overcome before or during the change movement, whereas the modern paradigm tends to regard it as a valuable source to achieve intended changes since it transfers important information from employees to managers if some strategies like open communication, active listening, and involving change recipients are adopted (Bareil, 2013; Schweiger, Stouten, & Bleijenbergh, 2018).

2.2.2 Positive Attitudes Toward Change

Many organizational change researchers emphasized that organization members' positive attitudes toward change should be attained prior to and throughout the change initiative to reach desired change goals. Openness and commitment to change that are among the most studied positive attitudes are explained below, and readiness for change, which is the outcome variable of the study and another positive attitude, is explained in the following section in more detail.

Openness to change, which is the extent to which people are willing to embrace change and their optimistic belief that change brings positive consequences, is another construct that predicts successful organizational change (Miller, Johnson, & Grau,

1994). Wanberg and Banas (2000), in their study, revealed that optimism, self-efficacy, perceived control, and participation in the change process are antecedents of openness to change. They also found a positive association between openness to change and job satisfaction. Furthermore, a high level of openness to change was offered as an antecedent of readiness for change (Armenakis et al., 1993; Wanberg & Banas, 2000).

Commitment to change has been proposed as one of the most important attitudes in change literature to explain employees' behaviors during change initiatives. One of the most accepted definitions of this construct was suggested by Herscovitch and Meyer (2002) as an attitude that makes employees devote themselves to what is necessary for the success of a change initiative. Their multidimensional conceptualization consists of affective commitment to change, which results from a belief that change will provide benefits, continuance commitment to change, which arises from the awareness of the negative results of unsuccessful change movement, and finally, normative commitment to change, which reflects an obligation to support change initiative (Bouckenooghe, 2010; Herscovitch & Meyer, 2002). Devos, Vanderheyden, and Van den Broeck (2002) showed that successful change experiences and job satisfaction are positively correlated antecedents of affective commitment to change. Also, one study by Thien (2019) examined the mediating effects of cognitive, emotional, and intentional readiness for change on the relationship between two of the distributed leadership elements (i.e., leadership team cooperation, participative decision-making) and affective commitment to change. Results of this study indicated that even though there is no direct significant relationship between distributed leadership elements and affective commitment to change, all of the readiness for change dimensions mediated the relationship between participative decision-making and affective commitment. However, only the intentional readiness for change significantly mediated the relationship between leadership team cooperation and affective commitment to change.

2.2.3 Readiness for Change

When a decision is made to implement a change in an organization, organizational members evaluate the proposed change by considering whether this change is really needed, whether the organization and its members have the capability to make these changes and whether the change consequences would be positive for themselves and their organizations. Then, their beliefs, feelings, and intentions toward the considerations mentioned above impact their behaviors in such a way that they either resist or support the change initiative, and readiness construct corresponds to the cognitive precursor of these negative or positive attitudes and behaviors (Armenakis et al., 1993). Weiner et al. (2008) proposed that the higher readiness, the more effort is invested by organizational members during a change process. Moreover, the organizational members with higher readiness tend to hold on to the change more when facing obstacles compared to members with low readiness. Therefore, it can be asserted that having readiness for change among organizational members before and during the change enhances positive attitudes, such as commitment and openness to change, while lack of readiness gives rise to negative attitudes, such as resistance and cynicism (Kondakci et al., 2017).

Organizational change literature suggests addressing attitudes toward change through multidimensional perspective by considering cognitions about change, affective responses to change, and behavioral tendencies (Armenakis et al., 1993; Katz, 1960; Piderit, 2000). The same approach has been adopted in the change literature for investigating readiness for change (e.g., Armenakis et al., 1993; Bouckenooghe et al., 2009). Accordingly, cognitive readiness for change is related to the employees' thinking of the value of change in terms of its necessity (Oreg, 2006) and its possible advantageous and disadvantageous outcomes (Vakola, Armenakis, & Oreg, 2013), and also their beliefs about its feasibility by considering individual and organizational abilities (Holt et al., 2007). Emotional responses to change stem from positive and negative feelings and emotions toward proposed change, and emotional readiness for change is achieved when proposed change raises positive emotions (e.g., enjoyment, enthusiasm, hope) and feelings (e.g., optimism, satisfaction) (Kondakci et al., 2017;

Rafferty et al., 2013). The intentional component of readiness has been proposed in the literature as a factor that affects how organizational members would behave as a response to a proposed change. Vakola et al.'s (2013) literature review toward the reactions to change revealed that people with high intentional readiness for change exhibit active involvement and support to change while the people with a lack of intentional readiness tend to withdraw from and resist to the change.

2.2.3.1 Predictors of Readiness for Change

Numerous factors have been found in the literature to influence organizational members' readiness for change. In the following sections, literature findings regarding content, context, process, and individual factors are presented.

2.2.3.1.1 Content Factors

The content of the change initiative, that is, what is being changed, has been found to be influencing organizational members' readiness for change. Holt, Armenakis, Harris, and Field (2007) exemplified some common change-specific contents as alterations in organizations' strategies, structures, practices, and physical environment. For example, Chauvin and Ellett (1993, as cited in Holt et al., 2007) found that teachers' readiness for change was affected by their opinions about if the change contains just superficial alterations in procedures or leads to substantial differences in entrenched structures and values in the school. In another study, Rafferty and Simons (2006) obtained similar results that employees' readiness for change is higher for the change initiatives that involve fine-tuning modifications than changes that aim corporate transformation. In addition, in an investigation into how readiness for change is related to performance expectancy (i.e., the degree employees feel that the proposed change will improve their job performance) and effort expectancy (i.e., the degree of ease that would occur in the job after the proposed change is completed), Kwakh and Kim (2008) found that both performance and effort expectancies regarding proposed change are positively associated with readiness for change.

2.2.3.1.2 Context Factors

Some contextual circumstances in an organization that are external to the organizational members have been observed to influence their cognitions, attitudes, intentions, and behaviors. Some of the contextual factors investigated in the literature are presented below.

Firstly, there appears to be a relationship between organizational culture and climate and readiness for change in the literature. In an effort to examine the relationship between climate and readiness for change, Claiborne, Auerbach, Lawrance, and Schudrich (2013) conducted a survey of 356 welfare workers from eight child welfare organizations. Results indicated that an organizational climate that encourages employees to try new ways of doing the job and apply improvements enhances employees' readiness for change. Likewise, Saylı and Tüfekçi's (2008) study on the role of transformational leadership on the success of change showed that an organizational culture that has a structure enabling changes and that is innovative increases the success of the change initiatives by promoting positive attitudes toward change. In another study, İnandı and Gılıç (2016) obtained similar results that teachers' participation in the decision-making process and type of school culture (i.e., achievement culture, bureaucratic culture, task culture) predict their readiness for change. Participation at work, rather than participation in decision-making processes regarding a specific change, was investigated by Eby, Adams, Russell, and Gaby (2000). A highly participative organizational climate was found positively associated with perceived readiness for change.

As another contextual factor, trust, which is defined as one's inclination to be vulnerable to others by relying upon others' competencies, openness, and credibleness (Hoy & Tschannen-Moran, 1999; Mishra, 1996), draws researchers' attention. Rafferty and Simons (2006) found that trust in senior leaders was positively associated with readiness for change regardless of whether the proposed change corresponds to either fine-tuning or organization-wide changes, whereas trust in peers was positively associated with readiness for change only if the initiated change corresponds to fine-tuning changes. In contradistinction to this finding, Eby et al.'s (2000) results indicated

that employees' readiness toward large-scale organization change is higher if trust in peers is high in an organization. A similar result that trust among Turkish teachers predicted cognitive, emotional, and intentional readiness for change was attained by Zayim and Kondakçı (2015).

2.2.3.1.3 Process Factors

The factors related to how change is implemented in organizations correspond to the process factors, and they are found to play important roles in employees' reactions toward change (Bouckenooghe & Devos, 2007). Leader support for change and adopting a change procedure that allows participation and enhances communication have been found process-related factors in the literature.

Participation in change preparation and implementation stages are offered as a factor that helps employees to justify the change and create a sense of agency for them; thus, being more ready for organizational change (Holt et al., 2007; Oreg, Vakola, & Armenakis, 2011). Claiborne et al.'s (2013) findings also advise change leaders to foster employee participation to increase readiness for change. However, Schweiger et al. (2018) pointed out that participatory strategies are not required to be adopted every time a change is needed but should be benefited when employees are observed to be overwhelmed by the proposed changes resulting in stress and resistance to change. They also highlighted that redundantly applying the participatory strategies may slow down the change movement and decrease its efficiency since these strategies are mostly time-consuming. In addition to the participatory strategies in change movements, quality of change communication is considered another process factor that affects the success of change initiatives. Therefore, Armenakis et al. (1993) offered a communication strategy to convey a change message. According to this strategy, the need for change should be demonstrated firstly by showing the discrepancy between where the organization is and where it should be. Secondly, the change message must encourage employees by stating that both the employees and the organization have capabilities to cope with the discrepancies.

2.2.3.1.4 Individual Factors

Some personal variables' relationships with readiness for change have been investigated in the literature. In their study, Cunningham et al. (2002) found that employees with a proactive problem-solving approach towards work-related problems have higher readiness for prospective change. They also concluded that employees with high self-efficacy reported higher readiness for change. This result was supported by Rafferty and Simons (2006) as well. Although frequently used interchangeably with self-efficacy, self-competence, which is the extent to which an employee feels competent in the work role and arises from satisfactory working experiences (Allen & Meyer, 1990; Gebert, Boerner, & Agafonov, 1999), has been associated with readiness for change in the literature. For example, Kwakh and Kim (2008) and Kwakh and Lee (2008) found that perceived personal competence positively impacts readiness for change. In addition to these factors, Vakola (2014) hypothesized and confirmed that core self-evaluation, operationalized as the combination of locus of control, self-esteem, self-efficacy, and emotional stability traits, is positively associated with readiness for change. In another study, Kirrane et al. (2017) investigated the mediating role of psychological capital in the relationship between management support as a contextual factor and readiness for change. They defined psychological capital in a way that this construct has four components (i.e., hope, resilience, self-efficacy, optimism). The results of this study showed that both the direct and the mediating effects of psychological capital on readiness for change were significant. Contrary to the studies mentioned above, Eby et al.'s (2000) study reported no significant relationship between self-efficacy and readiness for change.

Apart from the individual traits, job outcome-related variables or work attitudes that arise from employees' perceptions about their jobs are recommended in the literature as predictors of readiness for change (Kondakci et al., 2017). For example, the organizational commitment that identifies the extent to which an individual is identified with and loyal to an organization was found significant predictor of readiness for change (Kwakh & Kim, 2008; Kwakh & Lee, 2008; Madsen, Miller, & John, 2005). In addition, the predictive value of teachers' job satisfaction levels for

their cognitive, emotional, and intentional readiness for change formed the central focus of a study by Kondakci et al. (2017). The authors found a central role of this job outcome-related construct in predicting each dimension of readiness for change and emphasized that practices that support teachers' positive attitudes toward change by increasing their trust and job satisfaction should be applied continuously in the schools. Otherwise, they proposed that practices aimed to increase teachers' readiness for change but are limited to the times of change are destined to limited success.

2.3 Job Satisfaction

Defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences," (Locke, 1976, p. 1304) job satisfaction has been one of the most widely investigated job attitudes in organizational psychology (Judge & Klinger, 2008). In the literature, several theories have been offered to explain antecedents of job satisfaction.

Hackman and Oldham's Job Characteristics Model (1976) proposed that enriching a job in terms of various core characteristics, namely task identity, task significance, skill variety, autonomy, and feedback, makes the job more satisfying. After this model was criticized due to the possibility of having two employees who are subject to the same core job characteristics but different levels of satisfaction, the model was modified in a way to include the growth need strength construct (i.e., an employee's eagerness to develop himself) as a moderator. As another situational theory, the value-percept theory offered by Locke (1976) argues that an employee's job satisfaction depends on different job aspects, of which importance differs from person to person. Therefore, not supplying a job facet that is deemed important by the employee results in job dissatisfaction. In addition, dispositional approaches have been frequently adopted to investigate antecedents of job satisfaction (Judge & Larsen, 2001). One of the most studied antecedents was dispositional affectivity, which was conceptualized as having two facets: positive affectivity, which is related to employee's enthusiasm, energy, and pleasurable engagement; and negative affectivity, which is related to employee's distress, unpleasurable engagement, and discontent (Watson, Clark, & Tellegen, 1988). Both positive and negative affectivity have been found to be

associated with job satisfaction (e.g., Agho, Mueller, & Price, 1993; Zayim Kurtay & Kondakci, 2019). Another dispositional construct that was found to be related to job satisfaction is core self-evaluation composed of self-esteem, self-efficacy, neuroticism, and locus of control (Judge, Locke, Durham, & Kluger, 1998; Judge, Bono, & Locke, 2000).

In addition to the antecedents of job satisfaction, a wide range of outcomes associated with job satisfaction has been shown in the literature. In a comprehensive literature review of job satisfaction, Judge and Klinger (2008) identified many workplace behaviors affected by employees' job satisfaction levels, such as attendance, turnover, incivility in work, and withdrawal. In the school context, teachers' job satisfaction levels were found to be related to their performance (Judge & Bono, 2001), commitment (Klassen & Chiu, 2011), and turnover (Ingersoll, 2001).

2.3.1 Job Satisfaction and Organizational Change

Because organizational changes cause changes in job and organizational characteristics, they may influence organizational members' job satisfaction either positively or negatively. For example, Cross and Travaglione (2004) argued that a successful downsizing would increase the remaining employees' overall satisfaction levels in an organization. On the other hand, organizational growth may decrease organizational members' job satisfaction because growth generally brings about changes in leadership style, more bureaucratic processes, and higher levels of formalization and power distance (Beer, 1964; Field & Johnson, 1993).

From another perspective, job satisfaction may affect organizational change by influencing organizational members' attitudes toward change. Generally, a positive relationship between job satisfaction and change attitudes has been found in the literature. For instance, Yousef (2000) found that satisfaction in relation to pay and promotion are positively associated with cognitive and affective attitudes toward change, respectively. Similarly, Chih, Yang, and Chang (2012) revealed that employees highly satisfied with their jobs are more likely to manifest positive attitudes toward change. In another study, Yousef (2017) hypothesized that various facets of job satisfaction directly and indirectly affect various dimensions of attitudes toward

organizational change (i.e., cognitive, affective, and behavioral). Results showed that satisfaction with coworkers is positively and directly associated with attitudes toward change, whereas other facets of job satisfaction, namely satisfaction with pay, promotion, supervision, and security, were not found significantly related to attitudes toward change. Results further showed that affective commitment mediates the relationship between attitudes toward change and all job satisfaction facets, except the supervision facet. Moreover, employees highly satisfied with their earnings, promotion, and colleagues were found to have a higher continuous and normative commitment to their organizations, which in turn, increase their support of the change initiative. On the other hand, higher job satisfaction prior to a change initiative may result in less positive attitudes to change since employees with high job satisfaction might tend to maintain the status quo. A result supporting this argument was obtained by Van Dam (2005), who showed that there is a negative and strong direct relationship between employees' job satisfaction levels and their positive change attitudes.

As for readiness for change, which is the outcome variable of the study, only a few studies in the literature have been found investigating the predictive value of job satisfaction for readiness for change. To illustrate, Kondakci et al. (2017) explored context, process, and job outcome-related variables' role on teachers' cognitive, emotional and intentional readiness for change after controlling for the background variables of 1649 elementary school teachers. Results showed that job satisfaction, which is operationalized as a job outcome-related variable in this study, plays a key role in predicting cognitive, emotional, and intentional readiness for change. Another study conducted by Azra, Etikariena, and Haryoko (2018) investigated how well job satisfaction predicts readiness for change. The researchers included in the study 36 employees at managerial levels from 6 departments in an organization. The findings indicated that job satisfaction explained 42.1% of variances in the readiness for change. However, the only significant aspect of job satisfaction in predicting managers' readiness for change was found to be the satisfaction with communication, whereas the other aspects of job satisfaction (i.e., salary, promotion, supervision, fringe benefits, contingent rewards, operating conditions, colleagues, and nature of work) were found insignificant. Furthermore, while examining the relationship

between job satisfaction and individual readiness for change, Vakola (2014) positioned *change impact* as a mediator variable in this relationship by asserting that employees' perspectives that change will be beneficial or harmful may determine their attitudes toward change. A full mediation was confirmed in this study, showing that employees with high job satisfaction are more ready to change because they regard outcomes of change as beneficial and thus decide upon supporting change.

Considering all of this evidence from the literature, job satisfaction seems to be an important variable that may determine how organizational members respond to the proposed changes in an organization. However, the agency that is a construct composed of self-efficacy and optimism, which are proved to be associated with attitudes toward change in the literature, as shown above, is conceptualized as a mediator variable in the model of the study. Therefore, a literature review about agency and teacher agency is presented in the following section.

2.4 Agency

Frequently ascribed to as being vague, complex, slippery, confusing, and elusive in the literature, the notion of agency is commonly encountered in structure-agency debate from sociology together with other academic disciplines such as philosophy, anthropology, and economics (Priestley et al., 2015a). Because of its broad usage, the agency has been conceptualized differently and associated with many terms, such as "selfhood, motivation, will, purposiveness, intentionality, choice, initiative, freedom, and creativity" (Emirbayer & Mische, 1998, p. 962).

In the long-standing structure-agency debate in sociology, the agency has been positioned against the structure in an effort to investigate which of them is more critical to explain individuals' actions. In this approach, the agency is considered a variable that individuals possess; thus, individuals' agency levels can vary, such as having less or more agency (Priestley et al., 2015a). Calhoun's (2002) agency definition, which is "the ability of actors to operate independently of the determining constraints of social structure," can be an example of this perspective (p. 7). In line with this, Rogers and Wetzel (2103) define agency as "the capacity of people to act purposefully and reflectively on their world" (p. 63). With a different individualistic perspective of

agency, Hallinger, Liu, and Piyaman (2017) emphasized people's belief in themselves about taking up the challenges they face, and they proposed that this belief provides them initiative and accountability. However, in their seminal article, Emirbayer and Mische (1998) claimed this individualistic approach ignores the concept's distinctive dimensions and variability in time and different contexts, and that causes overlooking its analyticity due to "a flat and improvised" conceptualization (p. 963). They proposed that agency and action should be separated from each other and be considered as different constructs even though "agency is inherent in the human action" (Priestley et al., 2015a, p. 23), and offered a well-accepted ecological view of agency by taking into account the interplay between individuals' intentionality and contextual factors.

Rather than seeing agency as a capacity or possessed, it has also been conceptualized as an outcome or achievement resulting from the interaction between individuals' capacities and the context surrounding them (Priestley et al., 2015a). This understanding considers not only individuals' capacity but also contextual factors that may affect their agency. This ecological view of agency reveals the dynamic interplay between personal, structural, and cultural conditions that may enable or constrain exercising of agency (Willis, McGraw & Graham, 2019), in turn, help us classify social actions as being reproductive or transformative (Emirbayer & Mische, 1998). Emirbayer and Mische (1998) argued that how people exert agency is specific to situations and depends on the interplay between past, present, and future. The agency is considered as:

> a temporally embedded process of social engagement, informed by the past (in its [iterational or] habitual aspect) but also oriented toward the future (as a [projective] capacity to imagine alternative possibilities) and toward the present (as a [practical-evaluative] capacity to contextualize past habits and future projects within the contingencies of the moment) (Emirbayer & Mische, 1998, p.963).

A metaphor of *chordal triad*, in which iterational, practical-evaluative, and projective dimensions "resonate as separate but not always harmonious tones" (p. 972) has been used to illustrate the relationship between these dimensions. Figure 2.1 demonstrates a model established by Priestley et al. (2015a) based on Emirbayer and Mische's conceptualization of agency.

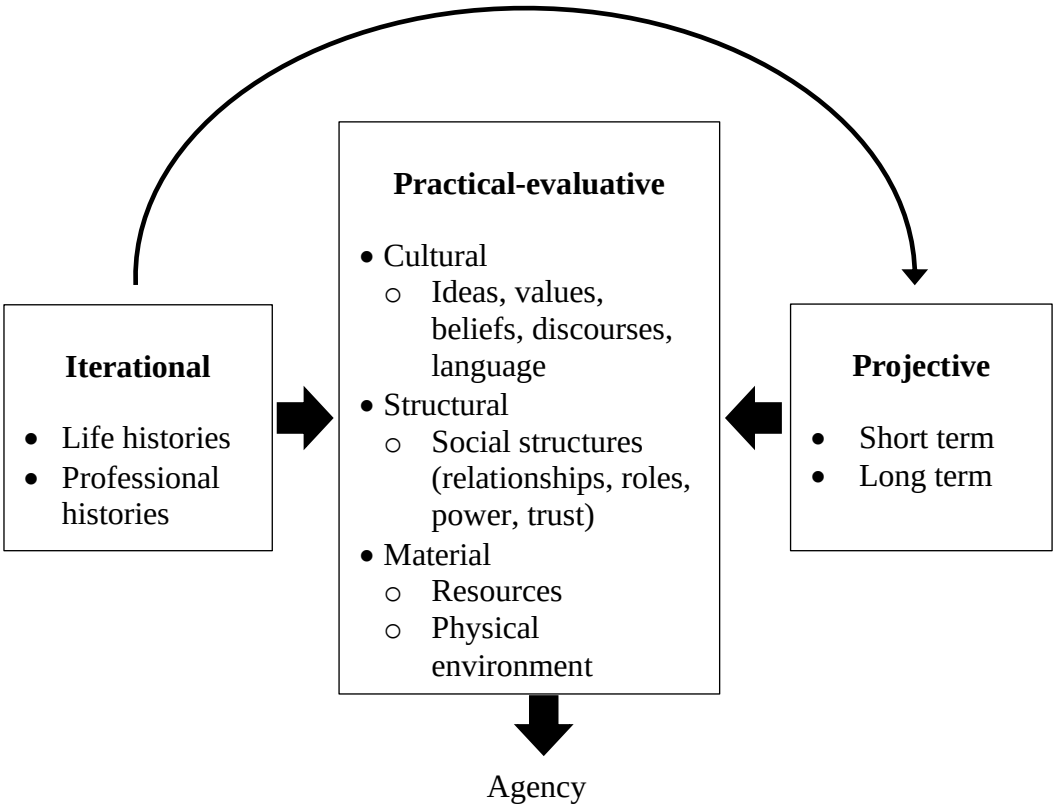

Figure 2. 1. The model portraying the achievement of agency. Reprinted from "Teacher Agency: An Ecological Approach," by M. Priestey, G. Biesta, and S. Robinson, 2015, p. 30., Bloomsbury Publishing Plc, Copyright 2015 by Mark Priestley, Gert Biesta and Sarah Robinson.

As illustrated in Figure 2.1, the iterational element relates to people's past cognitive and behavioral patterns embedded in their personal and professional histories; thereby, people act accordingly with these patterns to sustain their identities, relationships, and organizations. For teachers, for example, their abilities, knowledge, beliefs, and values that their personal and professional experiences have shaped may determine how they exercise agency (Priestley et al., 2015b). However, not only people's past but also their short- and long-term projections and hopes, fears, and desires about the future, which draw upon their past experiences, as shown in Figure 2.1, may affect individuals' agency. Priestley et al. (2015a) asserted that the more people's ability to make expansive projections about the future, the greater agency they may achieve. As stated above, the agency is associated with the past and future; however, people can only enact agency in the present. In relation to that, the practical-evaluative aspect of agency

entails determining people's trajectories of action by evaluating cultural, structural, and material resources and constraints in their present contexts. However, it is worth noting that even though the current literature tends to focus on the ecological view of agency, even Priestley, Edwards, Priestley, and Miller (2012), who strongly support the ecological view, acknowledge that causative influences of individual capacity and contextual factors can be evaluated separately for different analysis purposes. This type of conceptualization of agency is frequently encountered in studies that investigate agency in the educational context.

2.4.1 Teacher Agency

Although the concept of agency has been widely investigated in many fields for a long time, there is little empirical educational research and theory development regarding teacher agency, especially in educational change literature (Priestley et al., 2012; Van der Heijden et al., 2015). Moreover, as with the concept of agency, there are numerous conceptualizations of teacher agency. Toom, Pyhältö, and O'Connell Rust (2015, p. 616) defined agency as "willingness and capacity to act according to professional values, beliefs, goals and knowledge in the different context and situations" and emphasized that teacher agency is an important capability to enhance student learning, achieve collaborative learning and professional and school development. Similarly, Pyhältö, Pietarinen, and Soini (2012) addressed teacher agency in the scope of learning and conceptualized it as a capacity of teachers to manage learning at the individual and community levels. According to them, taking responsibilities, producing and coordinating the ideas, and monitoring the change process are some of the indicators that characterize teacher agency in educational change. Hadar and Banish-Weisman (2019, p. 138) defined agency as "a teacher's capacity to initiate and the enactment of this capacity to actively direct his/her professional life in accordance with his/her own will, judgement and choice." Another definition for teacher agency by Anderson (2010) also acknowledges it as a capacity and links it to making choices, taking actions, and executing changes.

In contrast to the aforementioned individualistic conceptualizations of teacher agency, some researchers have shown regard to the context, as well, where teachers exercise

agency. For example, Hilferty (2008) refers to agency as “the power of teachers to actively and purposefully direct their own working lives within structurally determined limits” (p. 167). Lasky (2005), in line with the ecological view of agency, emphasized that teacher agency is affected by both social and school structures (i.e., resources, norms, and policies). She further argued that teachers' decisions and actions are rooted in their past actions, affected by current context, and shape their future actions.

It was proposed by Pyhältö et al. (2012) that teachers’ self-efficacy, motivation, and participatory skills reflect their professional agency. Their everyday interactions with their colleagues and within the schools both shape their agency and enable or hinder them from enacting agency. In the same manner as Pyhältö and her colleagues offered, Liu, Hallinger, and Feng (2016) conceptualized agency as a construct with cognitive, emotional, and behavioral dimensions represented by teachers’ self-efficacy in terms of their professional learning and teaching effectiveness, optimism, and constructive engagement. Therefore, teacher agency represents an attitude regarding teachers’ actions, motivation, and involvement proactively to organizational development initiatives. These authors, in their study, investigated the mediative roles of teacher trust and teacher agency on the relationship between teacher professional learning, which is a requirement for teachers to adapt to the changes introduced by school reform successfully, and learning-centered leadership. The researchers defined teacher agency as "the teachers' initiative, motivation, and drive to engage in proactive efforts to contribute to school development" (p.81) that is reflected by four dimensions, namely learning effectiveness, teaching effectiveness, optimism, and constructive engagement, and those dimensions provide a basis in this thesis to study teacher agency. The results of structural equation modeling, which allows researcher to understand the significant relationships between the variables, showed that learning-centered leadership has a positive moderate direct effect on teacher agency, and teacher agency has a moderate direct effect on teacher professional learning. Furthermore, the bootstrap analysis revealed that learning-centered leadership is mediated by both teacher agency and teacher trust. However, a closer look at the results reveals that the learning effectiveness and teaching effectiveness dimensions exerted significant indirect effects on teacher learning while optimism and constructive

engagement dimensions did not. While the researchers gave an account of the insignificant effect of constructive engagement on teacher learning by referring to the power distance culture in China where the study was conducted, they could not explain why the optimism dimension was not found as a significant mediator in the relationship. All in all, this study achieved to show the mediating effects of teacher agency and teacher trust on the relationship between learning-centered leadership and teacher professional learning. Furthermore, although the authors in their paper did not explicitly demonstrate any link between these dimensions and teacher agency, literature on agency supports their conceptualization. Evidence for this conceptualization found in the literature is presented below.

In his structuration theory, Giddens (1984) proposed that individuals can exercise agency only if they believe that they have the necessary abilities, knowledge, and competence and use them with the purpose of achieving a specific goal. Similarly, self-efficacy is the key mechanism to explain human agency in social cognitive theory (Bandura, 1989) since people are not apt to take action if they do not believe in their capacities to achieve particular outcomes. Therefore, self-efficacy influences how people perceive situational opportunities and difficulties, set their goals, and exhibit behavior for these goals (Alkire, 2005). A key study investigating what characterizes teachers as change agents is that of Heijden, Geldens, Beijaard, and Popeijus (2015), which revealed that being lifelong learners and eagerness and willingness to learn are associated with teacher agency, and teachers use their agency to develop themselves in teaching through professional learning. It is found in the literature that the stronger teachers' self-efficacy, the more they are open to new ideas (Pyhältö et al., 2012). Therefore, learning effectiveness which is defined by Liu et al. (2016) as “teachers’ beliefs about their motivation, ability, and persistence as learners” (p. 81) has been proved in the literature to be a strong precursor of teacher agency.

Not only self-efficacy about professional learning but also self-efficacy about teaching has been offered as a part of teacher agency. To illustrate, Heijden et al. (2015) found that mastery in the teaching profession that enables teachers to acknowledge a need for change and apply various teaching strategies to enhance student learning

characterizes teachers as change agents. Furthermore, the teachers who empathize and build strong social relationships with their students seemed to behave more agentic during educational change. These teachers were also observed having high self-efficacy about their teaching skills as believing they can positively influence students' learning and well-being. Therefore, teachers' beliefs regarding their teaching considerably influence their agency. This type of self-efficacy was defined as teaching effectiveness by Liu et al. (2016), and it "encompasses teacher belief about their ability to work effectively with different types of pupils and achieve their goals in the classroom" (p. 81).

Apart from learning and teaching effectiveness, optimism that "reflects teachers' attitudes toward colleagues and the likelihood of future success" has been offered as a dimension of teacher agency (Liu et al., 2016, p. 81). Because optimistic people, in their projections, tend to expect good things will happen in the future, they are more likely to support organizational change (Wanberg & Banas, 2000). Heijden et al.'s (2015) findings revealed that teachers who exhibited agentic characteristics during an educational change process were motivating their colleagues, cooperate with them, and showing collegiality during the process. On the contrary, despair, which is a near antonym of optimism, has been offered as an attribute that impedes teacher agency (Pantić, 2015).

Teachers' constructive engagement, which is considered another dimension of teacher agency, is related to teachers' attitudes to increase their influence in school by setting goals, making plans to reach these goals, facing up to difficulties, benefiting from available resources, and trying new ways of doing routine work (Liu et al., 2016). Frost (2006) also asserts that being an agent requires people to go after their intentions and objectives by taking self-conscious actions. Therefore, agentic teachers are expected to be innovative to generate ideas or open to new ideas to improve educational activities and put these ideas into action by proactively taking initiatives and influencing school activities positively (Heijden et al., 2015).

Considering the teacher agency dimensions proposed by Liu and her colleagues, it is appropriate to say that these dimensions correspond to the ecological view of agency.

For instance, learning and teaching effectiveness are related to the iterational dimension of the ecological view because their self-efficacy beliefs are shaped by their personal life histories like educational background and professional life histories, such as success in previous change movements. Furthermore, both teacher agency's optimism and constructive engagement dimensions contain elements from projective and practical-evaluative dimensions of the ecological view of agency. While optimism emphasizes the teachers' short and long-term projections that correspond to the projective dimension of ecological view, it is also related to social structures (e.g., relationships) that may enhance or inhibit teacher agency. Similarly, teachers may exhibit agency in the form of constructive engagement in their school only if their beliefs about cultural, structural, and material aspects of practical-evaluative dimension are congruent with their short and long-term trajectories. However, the agency approach of Liu and her colleagues can still be criticized for not paying due attention to the context, seeing it more as a capacity.

2.4.1.1 Teacher Agency and Educational Change

Teachers are expected to be agents of change, and a sustainable educational change is possible only if teachers' support for projected changes is attained (Turnbull, 2002). It is widely acknowledged that teacher agency is an essential mediator of change (Datnow, 2012; Kumpulainen, Kajamaa, & Rajala, 2018; Priestley et al., 2012) because teachers can use their agency that is their capacity to act in line with their professional purposes to support or inhibit change (Liu, Xu, & Stronge, 2018; Tao & Gao, 2017).

An ethnographic study by Robinson (2012) investigated how teachers activate their agency when top-down restrictive policy documents that try to shape their activities and conflict with their schools' pedagogy and philosophy are introduced. Teacher agency was conceptualized in the study as maintaining their own educational approaches and beliefs while fulfilling the requirements stated by the policy documents. Results of this study showed that when the changes are introduced via policy text documents, teachers firstly show compliance with or seem to comply with these changes to gain time for internalizing and reexamining these changes. After this

stage, they negotiate these changes among themselves to build a common understanding by considering the educational approaches adopted in the school. Teachers in this study were found to enact agency to collaboratively find ways to maintain their normal teaching practices while meeting the requirements by policy documents. Therefore, teachers who were forced by a policy document to make changes in their activities used their collective agency to make choices about applying the changes that were conflicting with their professional beliefs. Consequently, this study showed that the proposed changes in the policy document were not fully adopted by the teachers as they were but were adapted or shaped by teachers' agentic behaviors. Robinson underlined that teachers' pedagogical values and beliefs are important parts of teacher agency used to adapt and adopt policy reforms. She also emphasized that although teacher agency has been frequently associated in the literature with positive attitudes and practices toward change, teachers may exercise agency to retain the status quo, as was the case with this study (Robinson, 2012).

In another study, Sannino (2010) investigated how a teacher's discourse on problems about the evaluation method on students' learning in Italy has altered from disruptive and critical to agentive and constructive during a Change Laboratory intervention. This study challenged the prevalent negative connotation of resistance (i.e., an obstacle to change) and revealed that resistance could be an early form of teacher agency used to externalize the conflicts in a change process, which would, in turn, contribute to teacher participation in the change process.

Hökkä and Vähäsantanen (2014) investigated how school structure shapes teachers' agency during an educational change. For this purpose, two different research projects were carried out in two schools, where one had a loosely coupled while the other had a tightly coupled structure. The authors conceptualized teacher agency by associating it with professional learning and adhesion to their career trajectory and professional identities. The results showed that teachers exhibit their agency to resist or negotiate the top-down policies to preserve their professional identities in the loosely coupled school. In contrast, teachers in the tightly coupled school were observed to implement those top-down policies, even if they were not informed about these policies.

Moreover, even though the loosely coupled system enhanced teacher agency and professional development, it was observed to be an impediment to the change movement. On the contrary, teachers in highly coupled schools were observed to manifest a low level of agency while the organizational change was more effective compared to the loosely coupled school.

In a context of educational change that redesigned the secondary vocational schools' content and learning environment and teachers' roles, Ketelaar, Beijaard, Boshuizen, and Den Brok (2012) questioned how teachers' ownership, sense-making, and agency affect their positioning towards the change. Teachers with a high level of agency were found to be successful in benefiting from the context, which has favorable conditions to exercise agency, and shaping the context to create possibilities to enact agency. These teachers used their agency in accordance with their goals and wishes by taking active roles and initiatives to adapt to the changes. Unlike highly agentic teachers, teachers with medium agency have not been observed to use their agency to overcome the limitations of the school context for their own purposes. In other words, these teachers exhibited agency as much as the school context gave them an opportunity. However, a teacher who was considered experiencing a low degree of agency put the goals and demands of the school above his own in the process of change and did what the school expected of him without forming his own vision and expectations about change. This study showed that the degree teachers experience agency within their school context impacts their ownership of change depending on whether they make sense of the changes. In the same vein with Hökkä and Vähäsantanen's (2014) study, this study also concluded that a high level of teacher agency might lead to many teachers approaching the change according to their own goals by ignoring the actual goals of the change initiative. Therefore, Ketelaar and her colleagues underscored the importance of successful leadership in change movements that gives enough room for teachers to exercise agency while coordinating the change by providing guidelines.

Lasky (2005) examined how the interaction between secondary school teachers' professional identities, agency levels, and change context influence their professional vulnerability. The study was carried out during an imposed change initiative where

teachers felt that their professionalism was threatened and eroded by reforms that introduced new norms and gave more importance to accountability. In this reform context, teachers reported that their agency was limited, and they see themselves as reform mediators rather than reform generators. Although teachers reported that they felt vulnerable in this politicized reform context, they were somehow able to enact agency to protect their professional identities. This shows that if top-down changes conflict with teachers' professional identities, these changes can only be partially implemented due to the impossibility of changing teachers' entrenched notions toward their profession.

Jenkins (2020) scrutinized teacher agency during a very complex change process encompassing school development and curriculum reform. The study revealed that agency is a dynamic concept that can fluctuate over time and can be manifested by teachers proactively, reactively, or passively. When teachers perceived the need for change, they were mostly observed to proactively use their agency to initiate a change and achieve change goals. However, they used a reactive agency to control the effects of proposed changes if they had to contribute to the mandated change movement. Instead of proactively engaging with the changes, reacting to the changes was found to increase teachers' job-related stress and decrease their professional capacities. Also, it was observed that while teachers seem to be implementing changes, they may actually resist change by continuing their old practices or modifying the changes to conform to their professional objectives. Jenkins considered this behavior as an indicator of agency and termed it as the passive agency. The author noted that the type of agency that reduces the effectiveness of the change initiative the most and stresses the teachers out the most during change is passive agency. The study also reported that teachers might manifest different agency types at different stages of the change process depending on process and context factors.

Together these studies provide important insights into the relationship between teacher agency and educational change. Overall, the reviewed studies highlight that teachers are expected to be active agents in educational change initiatives to actualize the desired improvements, mostly related to teaching and student or professional learning,

in the classroom, school, or education system. However, many factors, such as the compatibility between change and teachers' professional identities, school structure, and the content of change, have been found to affect the way teachers practice their agency during change. Nevertheless, teachers use their agency by either supporting the change initiate actively, accepting it passively, or resisting it. This situation shows that teacher agency, which enables teachers to negotiate and influence educational change, can be considered a key construct to explain their attitudes toward change.

2.5 Summary of the Literature Review

Literature review shows that organizational change has been conceptualized by considering order, nature, levels, and intentionality of change. Regardless of the type of change, ignoring the organizational members during change was proposed as one of the main reasons for unsuccessful initiatives. Therefore, the present study aims to investigate the predictors of the individual readiness for change, which was proposed as a precursor for attitudes toward change in the organizational change literature. Despite the importance of antecedents of readiness for change for the success of change initiatives, many scholars have pointed out that there has been little empirical evidence about antecedents of readiness for change to date (Rafferty et al., 2013; Weiner et al., 2008). Moreover, it has been stated that while the literature has been mostly focused on the direct relationships between readiness for change and its antecedents, the more complex relationships among the variables have been little studied (Kondakci et al., 2017; Van Dam et al., 2008; Zayim & Kondakci, 2019). Thus, the present study included job satisfaction as an antecedent of readiness for change and teacher agency as a mediator between them to provide a more complex understanding between these variables, for which empirical evidence between them has been separately provided in the literature.

After presenting predictors and outcomes of job satisfaction in the literature review chapter, job satisfaction in the organizational change literature was reviewed. In the literature, both how organizational members' job satisfaction is affected by organizational change and how their job satisfaction predicts their attitudes toward change seem to be getting attraction. However, a great deal of previous research into

the relationship between job satisfaction and attitudes toward change has focused on change-related attitudes as the predictors of job satisfaction (Zayim & Kondakci, 2019). Although the relationship between these constructs, as well as the direction of the relationship, is still ambiguous (Vakola, 2014; Zayim & Kondakçı, 2019), it seems that there is more need in the literature to specify job satisfaction as an antecedent of change-related attitudes (Seashore & Taber, 1975). Especially for the readiness for change attitude, studies on the predictive value of job satisfaction are quite limited (Zayim & Kondakci, 2019). Therefore, this study provides an important opportunity to advance the understanding of job satisfaction as a predictor of readiness for change.

The last variable included in this study was teacher agency. Although there are many different definitions of this concept in the literature, the most popular conceptualization found is the ecological approach proposed by Priestley and his colleagues (2015a). Based on this approach, Liu et al. (2016) proposed a conceptualization of teacher agency with learning effectiveness, teaching effectiveness, optimism, and constructive engagement dimensions. This approach can contribute to the teacher agency literature, which has been dominated by qualitative research (Hadar & Banish-Weisman, 2018), by enabling researchers to investigate teacher agency quantitatively and linking teacher agency into educational change literature, which has been criticized for disregarding teacher agency in change models (Priestley et al., 2015b). Although teachers are frequently asked to be agents of educational change, the findings in the literature regarding whether the relationship between teacher agency and teachers' change-related attitudes is positive or negative are contradictory (e.g., Hökkä & Vähäsantanen, 2014; Jenkins, 2020). However, it has been widely acknowledged that teachers generally present agentic behaviors during change by playing an active role in either implementing or resisting change, or remaining passive and unengaged (Datnow, 2012). Furthermore, with regards to readiness for change, the role of teacher agency on this attitude has yet to be investigated. In addition, to the best of our knowledge, the only assertion found in the literature regarding the predictive value of job satisfaction for the agency was suggested by Priestley and his colleagues (2015a) as when teachers feel that they can exercise agency in their schools, they may consider their profession more meaningful.

Considering these gaps and the findings in the literature, this study aims to examine the mediating role of teacher agency in the relationship between teachers' job satisfaction and their readiness for the changes envisaged in the educational vision 2023 document.

CHAPTER 3

METHOD

Detailed information about the methodological steps that have been followed throughout the study is presented in this chapter. First of all, the overall design of the research is described. Next, the sampling procedure and demographic characteristics of the sample are provided. Moreover, the instruments used to collect data are explained in detail. Further, data collection procedures and data analysis are explained. At the end of the chapter, the possible limitations of the study are described.

3.1 Design of the Study

This study was designed as an associational study. The relationships between job satisfaction, teacher agency, and readiness for change and the mediating role of teacher agency on the relationship between job satisfaction and readiness for change were investigated using a quantitative approach in which a positivist stance was adopted. Therefore, correlational design was considered an appropriate approach for this study to investigate the existing relationships among the constructs without manipulating them (Fraenkel, Wallen, & Hyun, 2012), and how the predictor variable transmits its effect on the outcome variable through another variable (Hayes, 2018).

There are different types of correlational techniques ranging from simple correlation to more complex ones, such as path analysis and structural modeling. All of these techniques are suitable to investigate the relationships among two or more quantitative variables without manipulation (Fraenkel et al., 2012). In this study, structural modeling was preferred since it allows the researcher "for exploring and possibly confirming causation among several variables" (Fraenkel et al., 2012, p. 338). Therefore, Structural Equation Modeling with Partial Least Square (PLS-SEM) is the main statistical method used in this study because of several advantages it provides

over Covariance-based Structural Equation Modeling. Among the most important ones are being able to analyze non-normal data and being robust in analyzing second-order formative constructs, as is the case with the teacher agency and the readiness for change constructs in the present study. Furthermore, following a procedure offered by Zhao, Lynch, and Chen (2010), a mediation analysis was also conducted for hypothesis testing.

3.2 Sampling Procedure

Initially, a two-stage cluster sampling procedure was carried out to include teachers working in public primary, secondary and high schools in İstanbul. Accordingly, 10 districts from İstanbul (i.e., Arnavutköy, Ataşehir, Beşiktaş, Beyoğlu, Fatih, Kadıköy, Sarıyer, Şişli, Ümraniye, and Üsküdar) and 20% of the schools from these districts were randomly selected by using the base package version 4.0.3 in R (R Core Team, 2020). However, COVID-19 pandemic conditions, which resulted in distance education, thus making it challenging to reach the participants, obliged the researcher to follow a different sampling method, namely convenience sampling, due to time constraints and the COVID-19 related quarantine restrictions that affected inter-city travel and school visitation just after the researcher had begun to collect data by visiting the schools. Therefore, the study sample had to be changed. Consequently, the sample included primary, secondary and high level public school teachers all over Turkey.

3.3 Demographic Characteristics of the Participants

The participants of this study were primary, secondary, and high school level public school teachers in Turkey. In this study, a total number of 746 participants were reached by utilizing a cross-sectional convenience sampling method. 14 teachers who had unacceptable amounts of missing value in their responses, five participants who were found to be careless respondents, and 22 cases that were found to be outliers were removed from the dataset with the recommendations of Hair et al. (2017). In addition, 33 teachers who were found to work in private schools were also excluded from the sample. As a result, the final sample of the study comprised 672 cases.

Table 3.1 shows the demographic characteristics of the participants. Accordingly, of the public-school teacher participated in the study, 241 (35.9%) were from primary schools, 269 (40.0%) were from middle schools, and 162 (24.1%) were from high schools. Most of the study participants were female (75.6%). The mean age of the participant teachers was similar among primary (*M* = 38.95, *SD* = 8.82), secondary school (*M*= 38.00, *SD* = 8.02), and high school (*M* = 39.09, *SD* = 8.23) teachers, and participants' ages ranged between 23 and 65 years. Teachers' year of experience in the teaching profession was also similar for primary (*M* = 15.80, *SD* = 8.81), secondary (*M* = 14.18, *SD* = 7.88), and high school teachers (*M* = 14.95, *SD* = 8.35). More than two-thirds of participants indicated that they had not participated in any training towards the changes envisaged by Turkey's Education Vision 2023 document. Participants were also asked whether they had carried out administrative duty in their careers, and 55.2% of the primary school teachers, 57.2% of the secondary school teachers, and 57.4% of high school teachers stated that they had not held any administrative position. The average number of students in the schools where participant teachers worked was 718.82 (*SD* = 561.44) for primary schools, 747.31 (*SD* = 593.37) for secondary schools, and 605.67 (*SD* = 553.42) for high schools.

3.4 Instruments

The data collection instrument was comprised of a demographic information form (Appendix G) developed by the researcher, Job Satisfaction Scale developed by Tezer (1991), Teacher Agency Scale first developed by Liu, Hallinger, & Feng (2016) and adapted to Turkish by Bellibaş, Çalışkan, and Gümüş (2019), and Readiness for Change Scale developed by Kondakçı, Zayim, and Çalışkan (2013).

Table 3.1

Demographic Characteristics of the Participants

	Primary school (n = 241)				Secondary school (n = 269)				High school (n = 162)				Total (n = 672)			
	f	%	*M*	*SD*	*f*	%	*M*	*SD*	*f*	%	*M*	*SD*	*f*	%	*M*	*SD*
Gender																
Male	62	34.6			62	23.0			40	24.5			164	24.4		
Female	179	65.4			207	77.0			122	75.5			508	75.6		
Age			38.95	8.82			38.00	8.02			39.09	8.23			38.60	8.37
Experience			15.80	8.81			14.18	7.88			14.95	8.35			14.95	8.36
In-service training																
Yes	72	29.9			84	31.2			52	32.1			208	31.0		
No	169	70.1			185	68.8			110	67.9			464	69.0		
Admin duty																
Principal	40	16.5			44	16.4			19	11.7			103	15.3		
Vice principal	51	21.2			49	18.2			40	24.7			140	20.8		
Both	17	7.1			22	8.2			10	6.2			49	7.3		
None	133	55.2			154	57.2			93	57.4			380	56.6		
School student number			718.8	561.4			747.3	593.4			605.7	455.3			702.9	553.4

3.4.1 Demographic Information Form

Information about participants and their schools was obtained through a demographic information form comprised of questions about gender, age, marital status, school level, experience in the teaching profession, whether teachers took any administrative role, number of students in the school, whether teachers participated in any in-service training related to the proposed changes, whether teachers participated in any organizational change project before.

3.4.2 Job Satisfaction Scale

The predictor variable of the study, which is job satisfaction, was measured by Job Satisfaction Scale (Appendix J) developed by Tezer (1991). This unidimensional Likert-type scale aims to measure individuals' overall satisfaction levels from their job through 10 items that range between 1 to 4. Therefore, the minimum score that can be obtained from this scale is 10, while the maximum is 40, where higher scores from this scale indicate a higher level of job satisfaction of employees. Sample items from the scale include "How much do you like your job?", "How would you recommend the job you are doing to your favorite friend?" She reported the reliability score computed with the Spearman-Brown formula as .91 but did not report on the instrument's validity.

Tezer reexamined the scale's dimensionality, validity, and reliability in another study conducted in 2001. The principal component analysis confirmed the scale's unidimensionality; Cronbach Alpha score regarding the reliability of the scale was found to be .81; significant correlations with other job satisfaction scales in the literature were reported as evidence for concurrent validity.

3.4.3 Teacher Agency Scale

To measure teachers' agency levels, the Teacher Agency Scale (Liu, Hallinger, & Feng, 2016) adapted to Turkish by Bellibaş, Çalışkan, and Gümüş (2019) (Appendix H) was used. This scale was constructed as a 5-point Likert scale and has Learning Effectiveness, Teaching Effectiveness, Optimism, and Constructive Engagement dimensions with six, seven, five, and six items, respectively. The original scale was

reported to have reliability scores in terms of Cronbach's alpha coefficients as .86 for Learning Effectiveness, .89 for Teaching Effectiveness, .87 for Optimism, and .90 for Constructive Engagement, and average variance extracted (AVE) was presented as .83. In addition, the scale developers conducted a confirmatory factor analysis and showed that the model fits the data well.

During the adaptation process, Bellibaş, Çalışkan, and Gümüş (2019) translated the scale into Turkish, made essential revisions regarding clarity of the items in line with field experts' feedbacks, administered the scale among teachers to control the wording, applied back-translation process, and assessed the scales' validity for Turkish context by conducting confirmatory factor analysis with the data collected from 376 teachers who work in elementary, middle, and high schools from three cities in Turkey. Like the original form of the scale, the Turkish version comprises 4 dimensions measured by 24 items. Sample items include "If I work hard enough, I can continue to improve my teaching skills" for Learning Effectiveness, "I can reach even the most difficult students when I try really hard" for Teaching Effectiveness, "In general, I have good relations with my colleagues." for Optimism, and "I do my best to demonstrate my professional impact in the school's change processes" for Constructive Engagement. The internal consistency score was reported as .72 for Learning Effectiveness, .76 for Teaching Effectiveness, .78 for Optimism, and .83 for Constructive Engagement.

3.4.4 Readiness for Change Scale

The outcome variable of the study which is the Readiness for Change was measured by the Readiness for Change Scale (RFCS) that was developed by Kondakçı, Zayim, and Çalışkan (2013) (Appendix I). The three-dimensional scale includes 12 items (4 for Cognitive RFC, 3 for Emotional RFC, and 5 for Intentional RFC) through a 5-point Likert scale ranging from 1 being "Strongly Disagree" and 5 being "Strongly Agree." Sample items from the scale include "Change will help me do my job better" for Cognitive RFC, "I usually do not like to change" for Emotional RFC, and "I would like to do my best for the success of the change process" for Intentional RFC. By summing the scores given to the items by the participants, participants' readiness levels regarding three dimensions are measured.

During the scale development process, the researchers prepared questions for three dimensions of readiness for change by considering the relevant attitudes toward change literature. After making the essential revisions in line with the experts' opinions, the scale was applied to teachers, and additional revisions were made with those teachers' feedbacks. In order to determine the scale construction, exploratory and confirmatory factor analyses were conducted by employing two separate samples. Exploratory factor analysis indicated that the scale has a three-factor structure as proposed in the literature. The confirmatory factor analysis results were also reported by the researchers, and they revealed a good fitting model ($\chi^2(49) = 206.40$, $\chi^2/ df = 4.21$, CFI=.97, RMSEA=.07, NNFI=.954). The reported reliability scores produced by the RFCS were .90 for intentional, .75 for affective, and .87 for cognitive dimension.

3.5 Data Collection Procedure

Prior to data collection, necessary permissions from the Middle East Technical University Human Subjects Ethics Committee (Appendix A) and İstanbul Provincial Directorate of National Education (Appendix B) were obtained to conduct the study. After obtaining these permissions, the researcher started to administer questionnaires in the teachers' lounge of the pre-determined schools during the lesson breaks by taking the consent of the participants through a consent form (Appendix C). However, this procedure could only be followed for three days because MoNE decided to move educational activities online and other media platforms due to the COVID-19 pandemic. Therefore, the researcher had to change the data collection procedure. The researcher kept visiting the previously chosen schools to inform school administrators about the study and request them to distribute the online format of the questionnaires to the teachers through their schools' internal communication channels (e.g., WhatsApp groups, e-mail lists). However, the response rate to questionnaires was very low, probably due to teachers' concerns about confidentiality. Therefore, it was decided to collect data in the online environment from teachers all over Turkey rather than only İstanbul.

Online data collection methods are increasingly used, and they provide many advantages to researchers compared to paper-and-pencil data collection methods

(Weigold, Weigold, & Russell, 2013). Firstly, data can be collected online from a larger and diverse population in a shorter time frame and at less cost. Then, the collected data can be easily transferred to the database with a very low risk of data loss during the transfer process (Lefever & Matthíasdóttir, 2007). Another advantage of collecting data online is that it allows respondents to answer the questionnaire at their convenience while reducing the disruption of daily activities in schools (Lefever, Dal, & Matthíasdóttir, 2007). However, the nonrandom nature of online data collection methods, having little control over the participants (e.g., having fraudulent respondents, inadvertently excluding people with specific characteristics or no internet access), and difficulties in reaching the target population (Lefever et al., 2007; Pecáková, 2016) can be examples of the disadvantages of online data collection. Nevertheless, Weigold and his colleagues' study (2013), in which equivalence of the paper-and-pencil and online data collection methods were examined, showed that the data collected through these methods are equivalent overall.

Because the data collection procedure with the paper-and-pencil method could not be completed due to the COVID-19 related restrictions, as mentioned previously, the online format of the survey was created using LimeSurvey, an online survey application. The reasons for choosing LimeSurvey over other services (e.g., Google Forms, Surveymonkey) were that the collected data could be stored in the university's servers, making it possible to ensure the regulations on the protection of personal data in terms of data retention, and the university provides support for this service when necessary. As is the case with the paper format, the online survey started with a section that informs participants about the purpose of the study, the researcher, and how anonymity and confidentiality are assured in the study. After the participants indicated that they participated voluntarily in the study, they were requested to fill the demographic form, job satisfaction scale, teacher agency scale, and readiness for change scale, respectively. At the end of the survey, the researcher's e-mail address was provided to the participants.

The online survey was distributed on Twitter and teacher Facebook groups, and data collection lasted four weeks in the fall semester of the 2020-2021 academic year. All

the data collected were anonymous. Participants had the right to withdraw from the study at any stage, but they were not allowed to leave any questions unanswered. The average time to complete the survey was 15 minutes.

3.6 Data Analysis

The *psych* (Revelle, 2020), *stats* (R Core Team, 2020), and *car* (Fox & Weisberg, 2019) packages available in statistical software R were used to conduct missing value and descriptive analyses, to detect outliers, to compute bivariate correlations among the study variables, and to run Mann-Whitney U tests, Kruskal-Wallis tests, and post-hoc Dunn's tests in order to investigate whether the control variables result in significant differences in the endogenous variables. Moreover, SmartPLS version 3.3.3 (Ringle, Wende, & Becker, 2015) was used to assess the measurement model metrics such as reliability, convergent validity, and discriminant validity and evaluate the structural model. More detailed explanations regarding the PLS-SEM and data analysis procedures are given in the sections below.

3.6.1 Partial Least Square Structural Equation Modeling

With the improvements in computer systems and statistical analysis techniques, social scientists can go beyond first-generation univariate and bivariate analyses (e.g., analysis of variance, multiple regression) and establish more complex relationships among study variables with second-generation multivariate methods (Hair, Hult, Ringle, & Sarstedt, 2017). For instance, Structural Equation Modeling (SEM) allows researchers to simultaneously estimate the complex relationships between latent variables measured by one or more observable indicators and account for measurement error in these indicators at the same time (Vinzi, Chin, Henseler, & Wang, 2010).

SEM has two different methods: covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). Although CB-SEM, first presented by Jöreskog (1971), and the PLS-SEM, introduced by Wold (1980), appeared around the same time, CB-SEM has become more popular over time. However, Hair et al. (2017) showed that PLS-SEM has been increasingly used recently in many areas due to its methodological advantages over CB-SEM.

These two methods differ in many ways, such as their estimation procedures, assumptions, and objectives; therefore, these aspects should be considered when deciding between CB-SEM and PLS-SEM. CB-SEM employs the maximum likelihood estimation method to minimize the differences between the proposed model covariance matrix and sample covariance matrix, whereas PLS-SEM employs iterative ordinary least squares (OLS) regressions to maximize the endogenous latent variables' explained variance (R^2) (Hair et al., 2017). Therefore, CB-SEM is better to test theories, whereas variance-based PLS-SEM is superior to CB-SEM when the knowledge regarding the relationships among the constructs is scarce and is needed to be explored (Vinzi et al., 2010).

Although both techniques were proved to be successful in complex models, CB-SEM often limits researchers because it requires normally distributed data and larger sample size than PLS-SEM requires. Therefore, PLS-SEM should be preferred in social science studies when the data is non-normal, a small sample is employed, and different scale types are used. Besides, PLS-SEM was found to be having greater statistical power than CB-SEM (Henseler, Ringle, & Sinkovics, 2009) and better handle formative measurement models. However, PLS-SEM also has some limitations; not having goodness-of-fit indices and being unsuitable for models with causal loops. In this study, these limitations do not pose obstacles for using PLS-SEM since the aim is not to confirm a theory, and the model does not contain causal loops.

Another advantage of SEM can be considered as its capability to establish models containing higher-order constructs formed by or reflect the more concrete lower-order constructs. Using higher-order constructs (also known as composite-based methods and hierarchical component analysis) has become a trend in PLS-SEM applications because it has many advantages when the proposed model is complex. For instance, by using higher-order constructs, theoretical parsimony can be attained, the model can be simplified, the bandwidth-fidelity dilemma can be overcome, and collinearity between formative indicators can be minimized (Hair, Sarstedt, Ringle, & Gudergan, 2018; Sarstedt, Hair, Cheah, Becker, & Ringle, 2019).

To sum up, a partial least square structural equation model with hierarchical component structures is deemed to be better suited to assess the measurement and structural models in this study because:

1. The data collected for this study is non-normal and negatively skewed, thus violates the multivariate normality distribution assumption CB-SEM requires,
2. The study has exploratory nature rather than confirmatory,
3. Second-order constructs are needed to reduce the number of structural model relationships among the constructs (i.e., teacher agency, readiness for change) comprised of many subdimensions (i.e., learning and teaching effectiveness, optimism, constructive engagement, cognitive, emotional, and intentional readiness for change) (Hair et al., 2018),
4. PLS-SEM allows placing formatively measured higher-order constructs in the model.

3.6.1.1 Disjoint Two-Stage Approach

After choosing PLS-SEM over CB-SEM, the researcher also needed to decide which approach to use to specify higher-order constructs. Literature review toward hierarchical component analysis revealed that prominent techniques are *repeated indicators approach* and *two-stage approach* (Becker, Klein, & Wetzels, 2012). Considering the research objectives and characteristics of the lower-order constructs, *the disjoint two-stage approach* was considered as the best-aligned approach in the present study for the following reasons:

1. If the standard repeated indicators approach was used, we would observe that subdimensions of the teacher agency and the readiness for change explain almost all of the variance of these second-order constructs ($R^2 \approx 1.00$) while exogenous constructs in the model (e.g., job satisfaction) would not be able to explain any variance. Thus, this situation would have led to a false conclusion that the relationship between exogenous and second-order constructs is non-significant (Hair et al., 2017; Sarsted et al., 2019). However, this problem is not experienced

when formative higher-order constructs are evaluated by using two-stage approaches (Becker et al., 2012).

2. Because lower-order constructs are not used in the second stage of the two-stage approaches, "the two-stage approach has the advantage of estimating a more parsimonious model on the higher level analysis" (Becker et al., 2012, p. 366).
3. Because the number of items in the scales employed in this study is unequal, using the repeated indicator approach, which obliges lower-order constructs to have an equal number of indicators, is not recommended (Becker et al., 2012; Hair et al., 2017; Sarsted et al., 2019).
4. The two-stage approach was found to be more successful than the repeated indicator approach in estimating path coefficients between exogenous constructs and higher-order construct and between higher-order construct and endogenous constructs (Becker et al., 2012; Sarsted et al., 2019).

The rationale for selecting the disjoint two-stage approach has already been given. Below, the researcher explains how the disjoint two-state approach was conducted in the study.

In the first stage of the *disjoint two-stage approach*, only the exogenous variable (i.e., job satisfaction) and the lower-order constructs were placed into the model as shown in Figure 3.1, and the construct scores were estimated for these latent variables from their indicators. Instead of interpreting the results obtained from the first stage, the scores of each lower-order construct were saved on the dataset and used as indicators of the second-order constructs in the second stage. As can be seen from Figure 3.2, teacher agency's and readiness for change's measurement models comprise four and three indicators, respectively, representing the latent variable scores obtained in the previous stage.

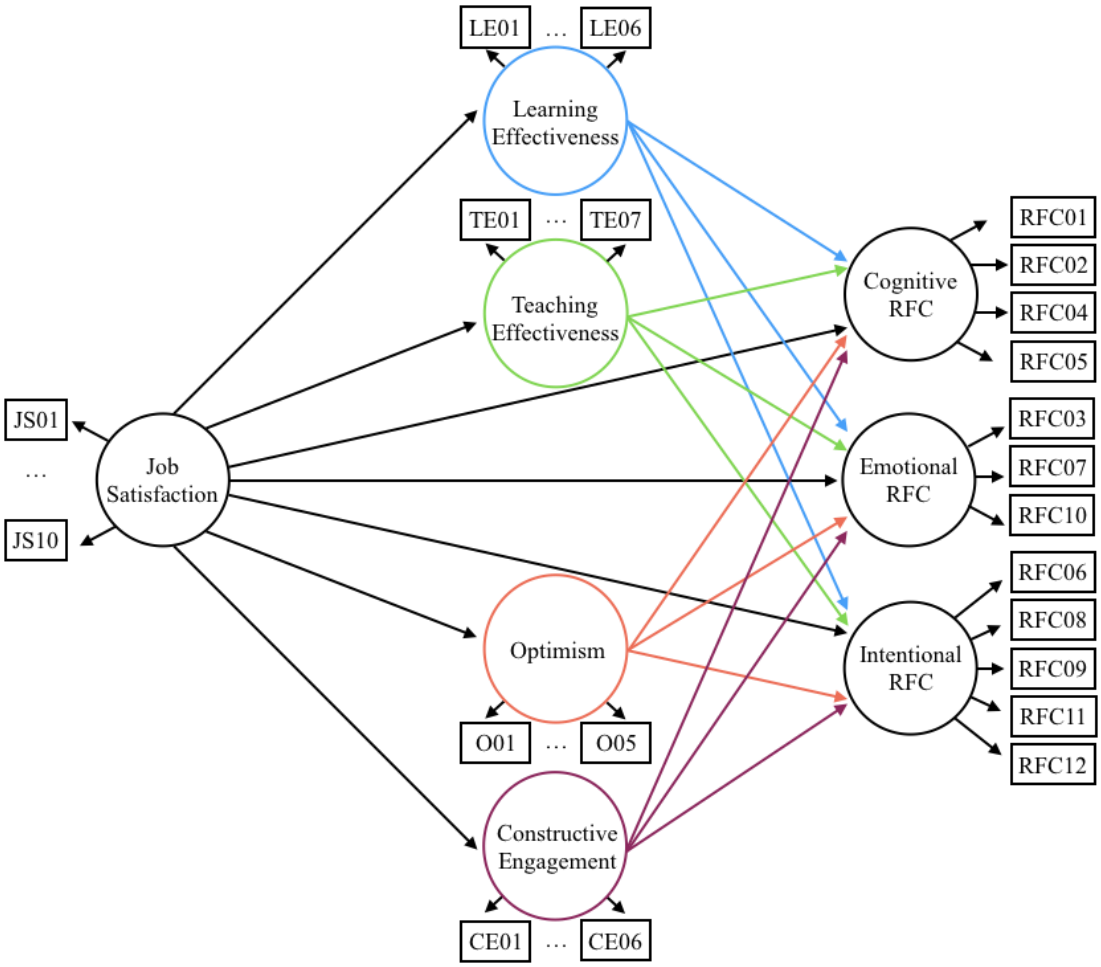

Figure 3. 1. The first stage of disjoint two-stage approach

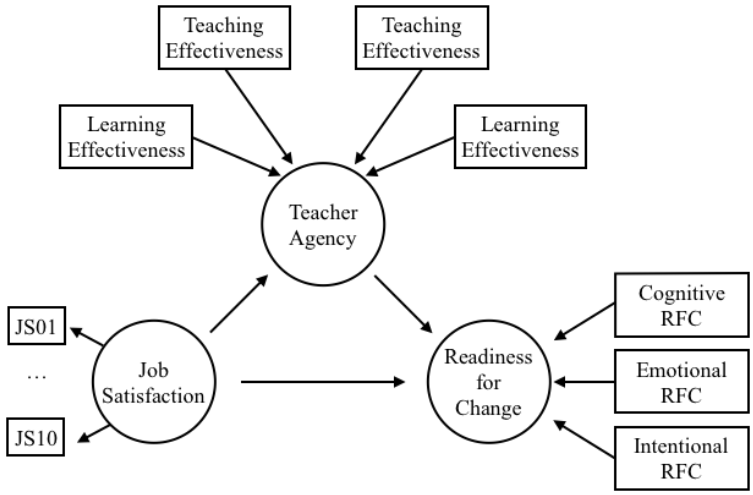

Figure 3. 2. The second stage of the disjoint two-stage approach and the conceptual model of the study

It is also necessary to report that the type of hierarchical latent variable model in this study is *reflective-formative* (the explanation for this can be found in the following subsection of this chapter), and the inner weighing scheme used for the PLS-SEM algorithm was selected as a *path weighting* scheme by following Becker et al.'s (2012) recommendation. By using the standard settings of SmartPLS software, the disjoint two-stage model was estimated using Mode A for reflective measurement models and Mode B for formative measurement models (Becker et al., 2012; Sarstedt et al., 2019).

3.6.1.2 Measurement Model Specification

Because PLS-SEM uses two modes (Mode A for reflective measurement models and Mode B for formative measurement models) to estimate the model parameters, specifying precisely the measurement models between latent variables and their indicators is essential to avoid erroneous parameter estimates (Hair et al., 2018). Therefore, to avoid model misspecification, which is a threat to the validity of SEM results (Jarvis, MacKenzie, & Podsakoff, 2003), guidelines for mental experiments (theoretical reasoning) offered by Jarvis et al. (2003) and confirmatory tetrad analysis (CTA) proposed by Gudergan, Ringle, Wende, and Will (2008) were conducted. Measurement models between lower-order constructs and their indicators were determined as reflective after the above-mentioned procedures were completed. The results of CTA were reported in the following chapter.

Model specification for second-order constructs, namely teacher agency and readiness for change, is also needed. Because teacher agency and readiness for change were conceptualized as the combination of four and three latent dimensions, respectively, these second-order constructs were considered as formative in this study (Becker et al., 2012). More specifically, the teacher agency concept is considered in this study in a way that it is constituted by learning effectiveness, teaching effectiveness, optimism, and constructive engagement dimensions, and the readiness for change construct is considered in a way that it is constituted by cognitive, emotional, and intentional dimensions as shown in Figure 3.2.

To sum up, two of the constructs (i.e., teacher agency, readiness for change) in the path model had a reflective-formative hierarchical component structure in which all

first-order constructs are measured by their reflective indicators, and the second-order constructs are formed by their lower-order constructs. In addition, job satisfaction, which is a predictor latent variable in the model, had a reflective measurement model.

3.6.1.3 Model Assessment

Because PLS-SEM models aim to explain as much of the total variance as possible of the endogenous variables in the model, metrics used to evaluate the quality of the model are related to the model's predictive characteristics and thus differ from how CB-SEM measurement models are evaluated (Hair, Howard, & Nitzl, 2020). Once the measurement model is approved in terms of the reliability and validity of the constructs, the structural model estimates can be examined to evaluate the model's predictive abilities. The following subsections explain the procedures and metrics used in this study to assess both measurement and structural models.

3.6.1.3.1 Assessment of Measurement Model

In the PLS-SEM context, *Confirmatory Composite Analysis* (CCA) is conducted to assess and confirm the measurement (outer) model. Reflective and formative measurement models' reliability and validity are assessed with different metrics and procedures because they rely on different measurement approaches.

In the first stage of the analysis, the model (Figure 3.1) has constructs that have only reflective measurement models. The measurement model evaluation starts with evaluating the indicator loadings and their significance. Hair et al. (2011) reported that the standardized loadings should be greater than 0.708, and the confidence intervals obtained through the bootstrapping procedure should not include zero. In the second step, constructs' internal consistency reliabilities are determined by checking the Cronbach's alpha (a) values and Jöreskog's (1971) composite reliability (CR) values. Both need to be more than 0.70 as a rule of thumb. In the third step, convergent validity is measured by the average variance extracted (AVE), which should be at least 0.50. The final step is to evaluate discriminant validity by using Fornell-Larcker criterion, cross-loadings, and heterotrait-monotrait ratio (HTMT) of the correlations. The Fornell-Larcker criterion requires the square roots of the AVE values regarding each

construct to be greater than constructs' correlations with other constructs. As for the cross-loadings, an indicator's standardized loading with the construct it belongs to should not be less than its loadings for the other constructs. Finally, a better indicator toward the discriminant validity in the PLS-SEM context than the abovementioned criteria is considered HTMT values, which should be less than 0.90 and statistically significant. Whether the HTMT value is statistically significant can be evaluated with bootstrap confidence intervals, and the interval excluding the value 1 implies the construct has discriminant validity.

After measurement models for the model shown in Figure 3.1 are evaluated and confirmed, as explained above, the measurement models regarding formatively specified second-order constructs also should be investigated in the second stage of the two-stage approach (Figure 3.2). It is worth noting that the relationship between lower-order constructs and the second-order constructs, rather than indicators of the second-order constructs, should be considered in the process of higher-order constructs' measurement model evaluation.

The measurement model evaluation for second-order constructs starts with checking whether there is any collinearity issue between the lower-order constructs that form the second-order constructs. The lower-order constructs are supposed to form different aspects of the higher-order construct. Therefore, a high level of collinearity among the lower-order indicators may indicate that a lower-level construct's information may be redundant if it is highly correlated with the other lower-level construct. Additionally, a high level of collinearity can affect weights' relevance and significance and thus result in misleading conclusions (Hair et al., 2018). Therefore, collinearity issues are checked by using variance inflation factor (VIF), which should be lower than the threshold value of 3 for each formative construct (Hair, Black, Babin, & Anderson, 2019). In the second step, the significance and relevance of the weights, which indicate each lower-order construct's contribution to the second-order construct, are assessed through the bootstrapping procedure.

3.6.1.3.2 Assessment of Structural Model

After the measurement models are confirmed, the structural model is evaluated based on the results of the second stage of the disjoint two-stage approach. First of all, the predictive ability of the structural model was assessed by looking at the coefficient of determination (R^2) and effect size (f^2). The coefficient of determination reflects the amount of variance in the endogenous constructs explained by the exogenous constructs, and R^2 values of 0.67, 0.33, and 0.19 are considered to be substantial, moderate, and weak, respectively (Chin, 1998). In addition to R^2 values, how R^2 values change when an exogenous construct is excluded from the model can inform researchers to evaluate the effect of excluded construct on endogenous constructs. This metric is described as effect size (f^2), and the values of 0.02, 0.15, and 0.35, respectively, denote small, medium, and large effects of an exogenous variable on endogenous variables (Cohen, 1988). It is worth noting that the blindfolding procedure to measure the predictive relevance (Q^2) has not been applied in this study because this procedure should only be applied when the endogenous variables have a reflective measurement model (Hair et al., 2017, Henseler et al., 2009).

After assessing the model's predictive ability, the final step in the structural model evaluation was to investigate the significance and relevance of the direct and indirect relationships among the constructs in the model. For this purpose, path coefficients, t-statistics, bias-corrected confidence intervals were calculated using a bootstrapping procedure with 5,000 subsamples. The procedure that was followed to evaluate the indirect relationship between the study variables is explained in the following subsection.

3.6.1.3.3 Mediation Analysis

This research’s aim goes beyond just evaluating the direct relationships between the study variables, and teacher agency was offered as a mediator in the relationship between job satisfaction and readiness for change (Figure 3.3). Therefore, mediation analysis is conducted in the scope of the study by following a procedure proposed by Zhao et al. (2010) shown in Figure 3.4.

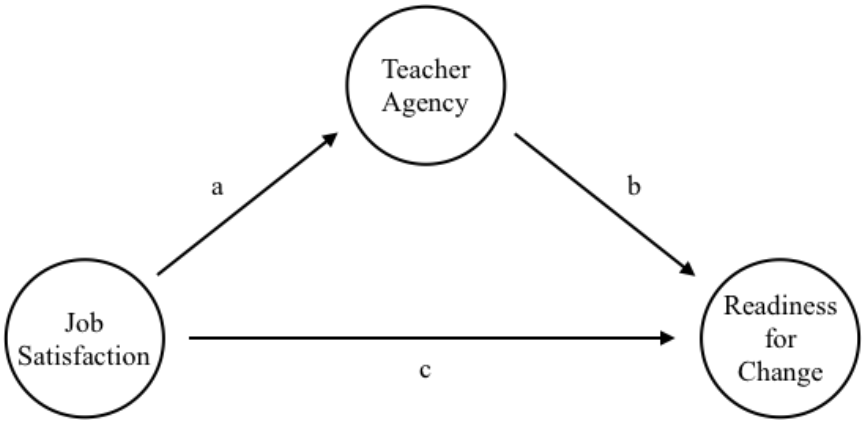

Figure 3. 3. A three-variable mediation model

Please note that the path coefficients between (1) job satisfaction and teacher agency, (2) teacher agency and readiness for change, and (3) job satisfaction and readiness for change were denoted in Figure 3.3 as a, b, and c, respectively.

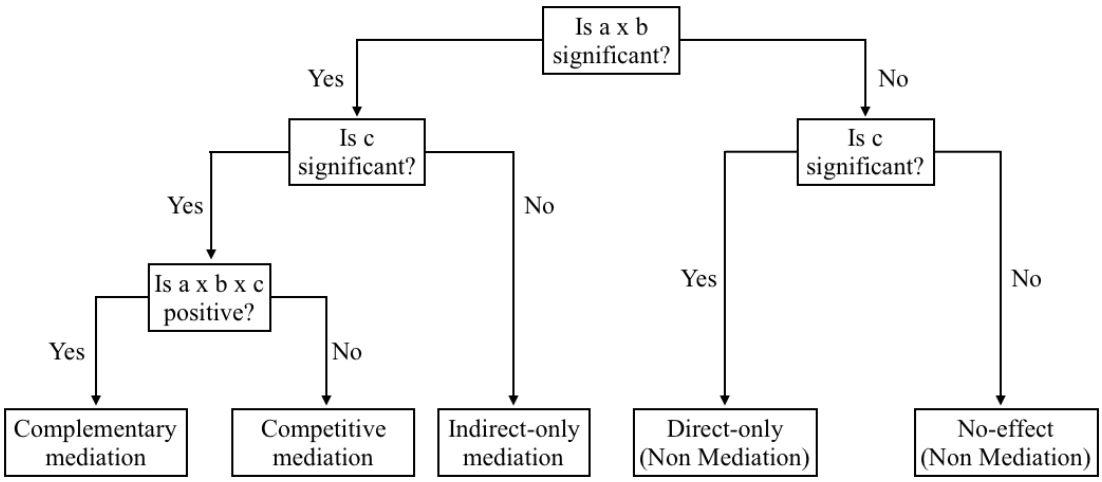

Figure 3. 4. Decision tree for establishing types of mediation and nonmediation. Adapted from "Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis," by X. Zhao, J. G. Lynch Jr, & Q. Chen, 2010, Journal of Consumer Research, 37, p. 201. Copyright 2010 by JOURNAL OF CONSUMER RESEARCH, Inc.

As depicted in Figure 3.4, Zhao et al. (2010) characterized three types of mediation and two types of non-mediation:

1. Complementary mediation: Both mediated effect (a x b) and direct effect (c) are significant and point in the same direction. This situation provides support for the

hypothesized mediating effect. However, it indicates that there may be an omitted mediating variable, which can explain the relationship between the predictor variable and the outcome variable.

2. Competitive mediation: Both mediated effect (a x b) and direct effect (c) are significant but point in opposite direction. This situation provides support for the hypothesized mediating effect. However, it indicates that there may be an omitted mediating variable, which can explain the relationship between the predictor variable and the outcome variable.
3. Indirect-only mediation: The indirect effect (a x b) is significant but not the direct effect (c).
4. Direct-only nonmediation: The direct effect is significant (c) but not the indirect effect.
5. No-effect nonmediation: Neither the direct nor indirect effects are significant.

3.7 Limitations of the Study

One of the major limitations of the study results from its sampling approach, which depends on non-probabilistic convenience sampling. Since the restrictions on COVID-19 applied throughout the country made it impossible for the researcher to travel between cities and school visits, which he planned to carry out to collect data from teachers working in schools selected from Istanbul by cluster random sampling method, participants of the present study were invited through URLs publicized on social media websites where members of the target population are likely to come across. Therefore, coverage bias may have occurred due to excluding some subpopulations (e.g., older teachers, teachers working in areas with limited internet access). Considering the study variables, it can also be argued that teachers with high job satisfaction tend to participate in the study more than their counterparts who have low job satisfaction. Therefore, results from the study sample may not be valid for other samples and should not be generalized to the population the sample represented.

Another limitation of the present study is that data is cross-sectional since the instruments were administered only once when the proposed changes have already been underway in TES. Therefore, the results of this study describe associations

between the variables instead of causations unless the literature strongly supports the directionality of the findings. In other words, the study recognizes that care must be taken when making interpretations about the directions of the relationships among variables.

This study's cross-sectional design based on self-report data makes it prone to mono-method bias. Although the measures used in the study are valid, highly context-bound variables of this study (e.g., readiness for change, teacher agency) would have been better measured if the data collection methods had been diversified.

Moreover, the present study was not specifically designed to analyze the associations of the study variables at a multi-level. Therefore, another limitation of the study can be proposed as focusing on overly individualized conceptualizations of readiness for change and teacher agency, thus overlooking the context, structure, and resources, as noted by Fuchs (2001) and Rafferty et al. (2013).

In the present study, items with lower loading than the cutoff value offered by Hair, Ringle, and Sarstedt (2011) were either retained or removed from the model by following the outer loading relevance testing offered by Hair et al. (2017). More specifically, three items from the Job Satisfaction Scale and two items from the Teacher Agency Scale were removed. Therefore, removing these items from the scales may be considered as a source of uncertainty about the content validity of the constructs even though the researcher paid regard to the relevance of the removed items from a content validity point of view. Another limitation regarding validity might result from the teachers' lack of knowledge about the current changes in TES. Because the researcher encountered some teachers who stated that they did not know the changes proposed by the Educational Vision 2023 document during his school visitations and because 69% of the teachers were found to be not received any in-service training toward these changes, the results of the present study may be taken to indicate the general readiness for change rather than readiness toward the changes by Educational Vision 2023.

Another major limitation is associated with that two formatively measured constructs are endogenously positioned in the model (Figure 3.2). In this study, second-order

endogenous constructs were established by aggregating the composite indicators; for instance, cognitive, emotional, and intentional dimensions were aggregated to create readiness for change composite variable. Although this approach provides a parsimonious model for this study, it prevents investigating the potential relationships between antecedent variable (i.e., job satisfaction) and the indicators of higher order constructs (e.g., learning effectiveness, teaching effectiveness, optimism, and constructive engagement; cognitive, emotional, and intentional RFC) (Cadogan & Lee, 2013; Howell, Breivik, & Wilcox, 2007; Temme, Diamantopoulos, & Pfegfeidel, 2014). Despite the problem mentioned above, Cadogan and Lee (2013) accepted that "there may be situations where there are benefits to be gained by modeling antecedents to composite variables at the composite level, rather than at the composite indicator level" (p. 238) and they laid down Howell et al.'s (2007, p. 215) argument as a condition: "If the indicators do show substantially similar relationships to their antecedents […] in a model where they are estimated as separate constructs, then their aggregation may indeed be justified." By considering this argument, the researcher of this study investigated the relationships between antecedent variable (i.e., job satisfaction) and indicators of second-order variables with the results obtained in the first stage of the disjoint two-stage approach. It was observed that the path coefficients for the relationships mentioned above were similar. For instance, the path coefficients between job satisfaction and the following variables were (1) .46 for learning effectiveness, (2) .35 for teaching effectiveness, (3) .56 for optimism, and (4) .40 for constructive engagement. Therefore, it can be claimed that the aggregated modeling of endogenous formative indicators worked well for this study's variables. However, this approach restrained the researcher from tracing the paths between the predictor variable and the indicators of the second-order constructs in the model. Nonetheless, rather than seeing this approach as a limitation, it is possible to say that it is a tradeoff between a more parsimonious model and more detailed explanations between study variables.

CHAPTER 4

RESULTS

This chapter presents the results of the statistical analyses conducted throughout the study. In the first section, preliminary analyses, such as normality, missing value, and outlier analyses, were reported. Subsequently, descriptive statistics and bivariate correlations among the variables were presented. In the third section, the results obtained from model assessment and hypothesis testing were provided. At the end of the chapter, major findings in the study are summarized.

4.1 Preliminary Analyses

4.1.1 Data Screening

After combining the data collected in paper-and-pencil and online formats, the researcher controlled the answers given to both the instruments and the demographic information form in terms of the minimum and maximum values. It was found that a participant stated the number of students in her schools is 20. However, a high school with only 20 students is unlikely and may be taken as a typo; therefore, the researcher replaced this value with the mean value of the student number for high schools.

The demographic form in the online format of the survey was designed so that the participant teachers had to indicate whether they work in a public or private school. Even if it was clearly stated at the beginning of the survey that only public-school teachers are aimed in this study, 33 participants were found to be private school teachers, and they were excluded from the sample.

The data were also screened to exclude the careless (unengaged) participants who marked the survey questions with identical responses. For this purpose, standard deviations of each participant's responses for each scale used in the study were

calculated. It was found that there were 5, 15, and 5 respondents, respectively, who answered each item in Job Satisfaction Scale, Teacher Agency Scale, and Readiness for Change Scale with the same score. To avoid any bias in the exclusion process, only the Readiness for Change Scale, which is the only scale having some reverse items among the data collection instruments, was taken into account. Because marking the same score from this scale can be considered a strong indication of carelessness, five participants who gave the same answers for each readiness for change scale item were excluded from the dataset. Apart from the issues mentioned above, no further anomaly in the dataset was observed.

Because the data were collected using both paper-and-pencil and online survey formats, the researcher investigated whether cognitive, emotional, and intentional readiness for change scores showed significant differences for different data collection methods. Mann-Whitney U Tests, non-parametric equivalent to independent samples t-test, were conducted to compare the scores obtained from paper-and-pencil and online formats because normality assumption of t-test was not met for the variables under investigation. One of the Mann-Whitney U test assumptions obliges distributions of the scores for both data collection methods to have similar shapes. As shown in Figure 4.1, scores for each readiness for change dimension have quite similar distribution patterns for different data collection methods. After confirming this assumption, the Mann-Whitney U tests were conducted. The tests showed no significant differences between paper-and-pencil and online data collection methods regarding cognitive (U = 18,236, p = .25), emotional (U = 13,801, p = .31), and intentional (U = 17,364, p = .62) dimensions of readiness for change.

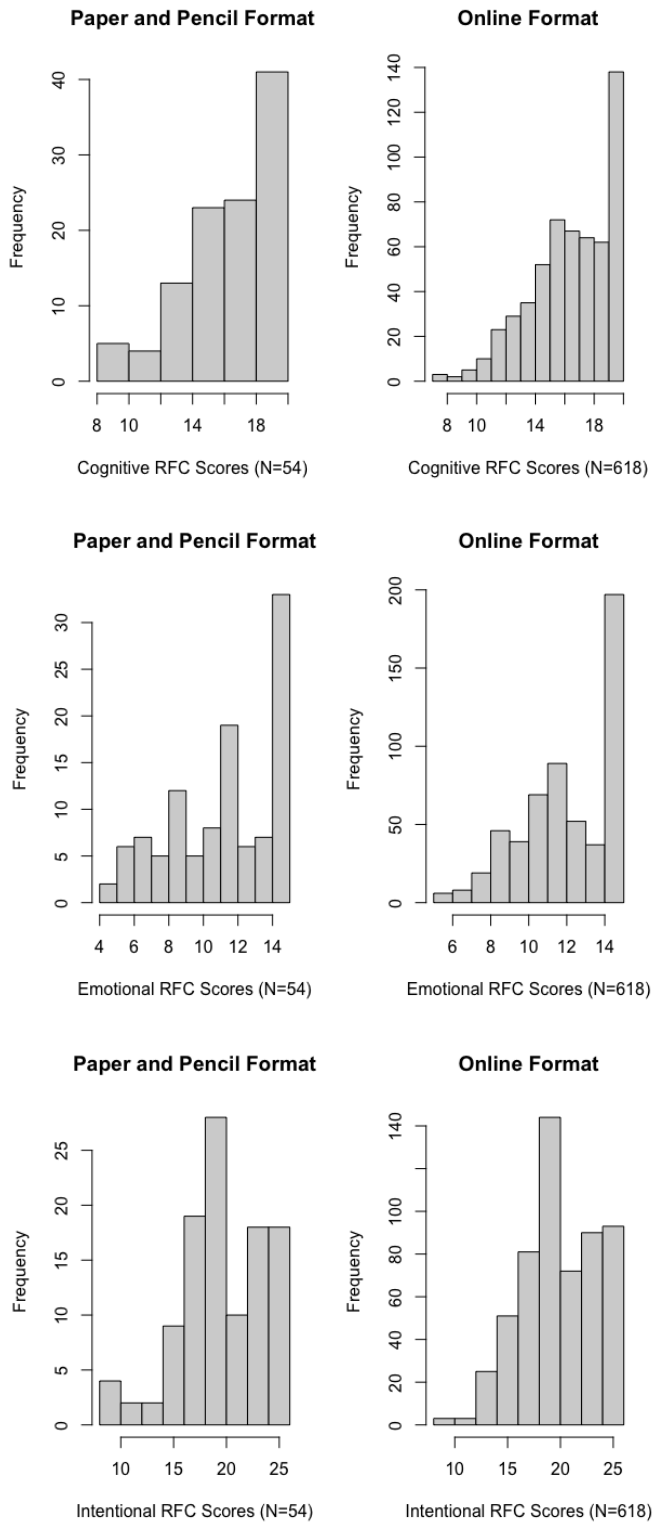

Figure 4. 1. Assumption of similar distribution for the Mann-Whitney U test

4.1.2 Missing Value Analysis

The online survey's settings were configured to oblige respondents to answer each question to proceed with the questionnaire. Therefore, there was no missing value for the data collected from web-based questionnaires. However, there were missing values that needed to be addressed in the data collected via paper-and-pencil format before the data analyses. It was observed that 14 participants did not respond to a high proportion of or left completely unanswered the Readiness for Change Scale, which was positioned at the end of the questionnaires. Therefore, the participants with more than 15% missing values were removed from the data file (Hair et al., 2017). Also, each observation was investigated for their missing values, and the mean value replacement treatment was utilized to address the items with less than 5% missing values by following Hair et al.'s (2017) recommendation.

4.1.3 Outlier Analysis

Univariate extreme values for dependent and independent variables were determined by computing standardized scores as suggested by Tabachnick and Fidell (2013), and the cases with z scores beyond ±3.29 were considered potential outliers. The results revealed one case for Job Satisfaction, one case for Learning Effectiveness, and six cases for Teaching Effectiveness, four cases for Optimism, three cases for Constructive Engagement, six cases for Cognitive RFC, two cases for Emotional RFC, and four cases for Intentional RFC that exceeded the criteria as mentioned earlier. Twenty cases were found as univariate outliers in total since some cases are observed as outliers for more than one variable.

Mahalanobis distances for each variable were calculated to screen the multivariate outliers (Tabachnick and Fidell, 2013). In the present study, there were eight degrees of freedom, which resulted in a critical Chi-square value of 26.12 (at $\alpha = .001$). Multivariate outlier test revealed nine cases exceeding this critical value.

Because some cases were found to be both univariate and multivariate outliers, 22 cases in total, not 29, were identified as outliers, and these cases were removed from the data set.

4.1.4 Normality

Skewness and kurtosis values, the results of the Shapiro-Wilk test, histograms, Q-Q plots, and box plots were investigated to check univariate normality assumption. The data showed deviation from normality except for a few items when the plots mentioned above were investigated. Also, the Shapiro-Wilk tests performed for each item confirmed the previous visual normality inspections and rejected the null hypothesis of no deviation from the normality for each item. In addition, skewness and kurtosis measures were observed between -1.58 and 0.33 for skewness and between -0.60 and 2.93 for kurtosis (Table 4.1). Therefore, it can be concluded that the data is not extremely non-normal since these values are between -3 and +3 (Field, 2009).

Furthermore, multivariate normality was checked by utilizing Mardia's test, and results revealed that the null hypothesis was rejected (with p values < .001), and thus multivariate normality assumption was not met.

Because normality issues may result in problematic results when maximum likelihood based CB-SEM is used (Hair et al., 2017), PLS-SEM, which relies on a non-parametric bootstrapping technique that is robust against non-normal distribution (Preacher & Hayes, 2004), is preferable for this dataset to diminish the effects of non-normality.

4.1.5 Differences in Study Variables Explained by the Grouping Variables

To clarify if differences in teacher agency and readiness for change can be explained by the grouping variables that were obtained via demographic information form, a series of Mann-Whitney U tests for grouping variables with two factors (i.e., male or female teachers, teachers having an in-service training or not) and multiple Kruskal-Wallis tests with post-hoc Dunn tests for variables with at least three levels (e.g., teachers working in primary, secondary or high schools) were conducted in R. These tests were preferred to parametric alternatives (i.e., t-test and one-way ANOVA) due to the non-normal distribution of the variables.

Table 4. 1

Means, Standard Deviations, Skewness and Kurtosis Values for Items

Items	*M*	*SD*	Skewness	Kurtosis
JS01	3.53	.64	-1.38	2.19
JS02	3.62	.59	-1.58	2.93
JS03	3.09	.80	-.81	.50
JS04	3.24	.75	-.73	.09
JS05	3.04	.68	-.39	.27
JS06	2.97	.95	-.74	-.31
JS07	3.32	.66	-.59	-.16
JS08	2.85	.86	-.40	-.46
JS09	2.63	.67	-.38	.05
JS10	2.14	.86	.33	-.60
TA.LE01	4.04	.89	-1.16	1.55
TA.LE02	3.71	.93	-.46	-.26
TA.LE03	3.67	.93	-.48	-.29
TA.LE04	3.53	.95	-.52	-.05
TA.LE05	3.91	.78	-.54	.22
TA.LE06	3.86	.93	-.93	.80
TA.TE01	4.14	.63	-.44	1.05
TA.TE02	4.19	.58	-.22	.60
TA.TE03	3.97	.76	-.81	1.51
TA.TE04	4.06	.80	-.68	.27
TA.TE05	3.86	.85	-.57	.14
TA.TE06	4.15	.57	-.38	1.63
TA.TE07	3.74	.75	-.42	.26
TA.O01	3.32	1.12	-.47	-.47
TA.O02	3.26	1.01	-.27	-.49
TA.O03	3.49	.96	-.49	-.17
TA.O04	4.33	.64	-.89	2.04
TA.O05	4.36	.60	-.69	1.44
TA.CE01	4.16	.62	-.45	1.25
TA.CE02	4.08	.63	-.49	1.03
TA.CE03	3.95	.74	-.66	.76
TA.CE04	4.03	.69	-.61	.83
TA.CE05	4.09	.68	-.67	1.26
TA.CE06	4.18	.68	-.80	1.84
RFC1	4.35	.82	-1.27	1.62
RFC2	4.17	.88	-1.00	.93
RFC3	4.11	1.08	-1.10	.37
RFC4	4.35	.83	-1.33	1.82
RFC5	4.04	.98	-.95	.57
RFC6	3.78	1.00	-.59	.00
RFC7	4.15	1.06	-1.21	.72
RFC8	3.98	.91	-.64	.03
RFC9	4.22	.80	-1.04	1.46
RFC10	4.1	1.03	-.94	-.03
RFC11	4.27	.71	-.79	.65
RFC12	4.01	.89	-.66	.03

Firstly, Mann-Whitney U tests were conducted to investigate whether gender or attending in-service training about the current change initiative explain any variations in the endogenous variables of the study. As presented in Table 4.2, neither gender nor having in-service training about the current change initiative was found to create significant differences in the endogenous variables in the model.

Table 4. 2

Mann-Whitney U Test Results

Endogenous variable	Gender		In-service training	
	U	*p*	*U*	*p*
Learning effectiveness	40,360	.55	50,030	.44
Teaching effectiveness	41,759	.96	47,897	.88
Optimism	41,922	.90	45,598	.25
Constructive engagement	39,919	.42	48,428	.96
Cognitive RFC	44,252	.22	48,984	.75
Emotional RFC	43,325	.75	48,256	.97
Intentional RFC	44,636	.17	51,636	.14

Furthermore, Kruskal-Wallis tests were conducted to investigate whether age, school level, school size, and taking an administrative role in teaching career create significant variation in the endogenous variables of the study. As reported in Table 4.3, age, school size, and administrative role did not explain a significant amount of variation in the variables of interest. However, the Kruskal-Wallis tests indicated significant differences in primary, secondary, and high school teachers' learning effectiveness ($H(2) = 8.04$, $p = .02$), teaching effectiveness ($H(2) = 20.20$, $p < .001$), optimism ($H(2) = 9.17$, $p = .01$), and constructive engagement ($H(2) = 14.79$, $p < .001$).

Subsequently, Dunn's Test for post-hoc analysis was implemented to compare teacher agency dimensions among primary, secondary, and high school teachers, and the results were presented in Table 4.4. Significant differences were found in primary and secondary school teachers' learning effectiveness ($p = .01$), teaching effectiveness ($p < .001$), and constructive engagement ($p < .001$). Moreover, there were significant differences between primary and high school teachers' teaching effectiveness and optimism.

Table 4. 3

Kruskal-Wallis Test Results

Endogenous variable	Age		School level		Administrative duty		School size	
	H	*p*	*H*	*p*	*H*	*p*	*H*	*p*
Learning effectiveness	40.63	.35	8.04	.02	.77	.86	137.79	.16
Teaching effectiveness	50.32	.09	20.20	.00	.10	.99	130.41	.28
Optimism	53.92	.06	9.17	.01	2.96	.40	124.20	.43
Constructive engagement	52.27	.06	14.79	.00	2.22	.53	134.40	.23
Cognitive RFC	28.82	.86	.07	.97	1.05	.79	126.36	.38
Emotional RFC	29.49	.84	1.00	.61	1.33	.72	135.26	.19
Intentional RFC	31.41	.77	.86	.65	2.01	.57	139.33	.14

Table 4. 4

Dunn's Test Results

Variable	School level I	School level II	Mean difference	Z-value	*p*
Learning effectiveness	Primary	Secondary	.16	2.83	.01
	Primary	High	.00	1.28	.60
	Secondary	High	-.16	-1.22	.67
Teaching effectiveness	Primary	Secondary	.18	4.17	.00
	Primary	High	.18	3.41	.00
	Secondary	High	.00	-.23	.97
Optimism	Primary	Secondary	.12	2.33	.06
	Primary	High	.17	2.79	.02
	Secondary	High	.05	.77	.96
Constructive engagement	Primary	Secondary	.19	.3.83	.00
	Primary	High	.09	1.73	.25
	Secondary	High	-.10	-1.65	.29

The grouping variables, whose effects on endogenous variables were insignificant, were not included in the study model. Apart from that, even though the school level was found as the only variable that yielded significant differences in some of the dimensions of teacher agency, it was not included in the model. This is because the present study was not designed as a multi-level study, so it does not have any school-level variable that may explain these differences.

4.1.6 Common Method Bias

Common method bias may occur due to the measurement method used in a study. For example, the respondents' social desirability or the instructions of the questionnaires may influence respondents in a way that they answer questions in a particular way that, in turn, causes the indicators in the model to have common a variance. As a result, the common method bias may inflate or deflate the path coefficients in the model and result in type I and type II errors, respectively. In addition, common method bias may cause to accept measurement models that do not have discriminant validity (Kock, 2015). Kock proposed to conduct a full collinearity test to identify common method bias and proved that this assessment is superior to the widely used Harman's single-factor test. In this test, any VIF values obtained for each of the latent variables in the model is greater than 3.3 suggests common method bias. These VIF values were found to be ranging between 1.00 and 1.88. Therefore, common method bias was not a threat for this study.

4.2 Descriptive Statistics Results

The descriptive statistics of the study variables with means, standard deviations, minimum and maximum mean values are reported in Table 4.5.

Table 4. 5

D*escriptive Statistics for Job Satisfaction Scale, Teacher Agency Scale, and Readiness for Change Scale*

Variables	*M*	*SD*	Possible range	Min	Max
Job Satisfaction	3.04	.48	1-4	1.50	4.00
Teacher Agency					
Learning Effectiveness	3.79	.61	1-5	2.00	5.00
Teaching Effectiveness	4.02	.47	1-5	2.43	5.00
Optimism	3.75	.65	1-5	1.80	5.00
Constructive Engagement	4.08	.50	1-5	2.33	5.00
Readiness for Change					
Cognitive RFC	4.23	.69	1-5	1.75	5.00
Emotional RFC	4.12	.84	1-5	1.33	5.00
Intentional RFC	4.05	.71	1-5	1.60	5.00

As presented in the descriptive statistics table, teachers, on average, reported that their job satisfaction level was high (M_{JS} = 3.04, SD_{JS} = .48). When the subdimensions of the teacher agency are analyzed, the mean values of teaching effectiveness (M_{TE} = 4.02, SD_{TE} = .47) and constructive engagement (M_{CE} = 4.08, SD_{CE} = .50) are close to each other and higher than the mean values of learning effectiveness (M_{LE} = 3.79, SD_{LE} = .61) and optimism (M_{O} = 3.75, SD_{O} = .65). Among the dimensions of readiness for change, the cognitive dimension had the highest mean score ($M_{Cog.RFC}$ = 4.23, $SD_{Cog.RFC}$ = .69), followed by the emotional dimension ($M_{Emo.RFC}$ = 4.12, $SD_{Emo.RFC}$ = .84) and the intentional dimension ($M_{Int.RFC}$ = 4.05, $SD_{Int.RFC}$ = .71). In the light of these descriptive data, teachers' readiness levels for the proposed changes by Turkey's Education Vision 2023 document can be considered high.

Bivariate correlations among study variables were presented in Table 4.7. While interpreting the correlations among the variables, the criterion proposed by Field (2009) was used. This criterion asserts that the Pearson correlation coefficients of .1, .3, and .5 indicate small, medium, and large effect sizes, respectively.

While moderate to large effects were found for the positive relationships between job satisfaction and teacher agency variables (e.g., learning effectiveness, teaching effectiveness, optimism, and constructive engagement), job satisfaction correlated significantly with small correlation coefficients with all readiness for change variables (e.g., cognitive RFC, emotional RFC, and intentional RFC).

All four aspects of teacher agency were significantly and positively correlated with each other, and these effects were either moderate or large. The highest positive correlation among teacher agency variables was achieved between teaching effectiveness and constructive engagement (r = .61, p < .01). It may indicate that teachers with high efficacy tend to set goals for themselves and endeavor to reach those goals.

Furthermore, all of the dimensions of teacher agency were significantly and positively correlated with readiness for change dimensions, and these effects were either small or moderate. While the smallest associations were observed between optimism and

cognitive (r = .23), emotional (r = .20), and intentional (r = .23) readiness for change, moderate effects were found between learning effectiveness and cognitive (r = .34) and intentional readiness for change (r = .40), and also between constructive engagement and intentional readiness for change (r = .39).

Lastly, readiness for change dimensions were also significantly associated (moderate to large effect) with each other. Emotional readiness for change demonstrated a positive correlation with moderate effects on both cognitive (r = .45) and intentional (r = .48) readiness for change, and there was a positive strong correlation between cognitive and intentional readiness for change (r = .74).

4.3 Structural Equation Modelling

The hypothesized model of the study was assessed by following the procedures explained in Chapter 3. In the following sections, the procedures and results regarding the confirmatory factor analysis, which was utilized to confirm the measurement model specification of the study, and assessment of measurement and structural models are presented in detail.

4.3.1 Confirmatory Tetrad Analysis

Although the measurement model specification of the first-order constructs was primarily determined by following the theoretical reasoning offered by Jarvis et al. (2003), a confirmatory tetrad analysis (CTA) was also conducted for substantiation of the reasoning process. Before conducting CTA, which can be applied to the constructs that have at least four manifest variables, there was a need to assign a variable to emotional dimension of readiness for change construct from one of the other constructs to complete its indicators to four. By following the procedure offered by Jamie, Rahman, Rahman, Wyllie, and Voola (2021), correlations between indicators of emotional dimension and indicators associated with other constructs were examined. The item RFC8 was observed as the highest correlated item with the items associated with the emotional dimension; therefore, this indicator was assigned to the emotional dimension to meet CTA's requirement.

All of the bias-corrected and Bonferroni-adjusted confidence intervals obtained from CTA were observed to include zero for all tetrads. Therefore, CTA confirmed the reflective measurement models for both job satisfaction and the dimensions of teacher agency and readiness for change.

4.3.2 Confirmatory Composite Analysis

Confirmatory composite analysis (CCA) was performed as an initial step in PLS-SEM to validate the measurement models (Hair et al., 2020). In the following subsections, results obtained from the assessment of first-order reflective and second-order formative models are presented.

4.3.2.1 Assessment of First-order Reflective Measurement Model

The relationships between first-order latent variables and their indicators were assessed in terms of convergent validity, internal consistency reliability, and discriminant validity.

After loading the model shown in Figure 3.1 and running it in the SmartPLS 3, the algorithm with a *path* weighting scheme converged after the 8th iteration. Firstly, convergent validity was investigated by looking at the outer loadings between first-order latent variables and their indicators. It was observed that most of the indicators' loadings were close to or above the cut-off value of .708. However, fourteen indicators' loadings (i.e., JS01, JS02, JS04, JS06, JS09, JS10, TA.LE01, TA.O04, TA.O05, TA.TE03, TA.TE04, TA.TE05, TA.TE06, TA.TE07) were found between .40 and .70 and one indicator's loading (i.e., TA.LE06) was found below .40. With the recommendation of Hair and his colleagues (2017), the indicator that has loading below .40 was removed from the model. Hair et al. (2017) also suggested removing items with loadings between .40 and .70 from the model only if removing these structures increases reliability. Accordingly, items that had low loadings and decreased the composite reliability of the constructs they are associated with were removed from the model. The removed indicators were JS01, JS02, JS10, TA.TE06, and TA.TE07. The remaining manifest variables and their loadings are reported in Table 4.6. Since all outer loadings of the reflective first-order constructs are at an acceptable level, it

can be concluded that the indicators have sufficient indicator reliability. It is worth noting that content validity issues were taken into account during the process of removing items, and this is why there are remaining items with loadings less than the recommended value of .70. For example, the item JS04 (i.e., Do you often feel satisfied with your job?), which has low loading (.57), was retained in the model because this item was considered an important indicator of the job satisfaction construct.

Next, the convergent validity of reflective first-order constructs was evaluated in terms of *average variance extracted* (AVE) (Hair et al., 2017). As reported in Table 4.6, all of the AVE values were at least .50, indicating that first-order latent variables in the model could explain more than 50% of the variance of the items associated with them. As a result, it can be concluded from the loadings and AVE values that the constructs in the model had satisfactory convergent validity.

After assessing the convergent validity, internal consistency reliabilities of the constructs were determined via composite reliability (CR) values and Cronbach's Alpha values. As reported in Table 4.6, all of the constructs' CR values range between .85 and .90, much higher than the critical value of .70. Moreover, Cronbach's alpha values of the constructs were also found above the critical value of .70. Therefore, it can be concluded that all constructs had a satisfactory internal consistency.

Table 4. 6

Assessment of Reflective Measurement Model

	Loading	CR	Cronbach's Alpha	AVE
Job Satisfaction		.87	.83	.50
JS03	.72			
JS04	.57			
JS05	.80			
JS06	.70			
JS07	.75			
JS08	.78			
JS09	.60			
Learning Effectiveness		.86	.80	.56
TA.LE01	.62			
TA.LE02	.80			
TA.LE03	.82			
TA.LE04	.77			
TA.LE05	.72			

Table 4.6 (continued)

	Loading	CR	Cronbach's Alpha	AVE
Teaching Effectiveness		.85	.77	.52
TA.TE01	.76			
TA.TE02	.80			
TA.TE03	.66			
TA.TE04	.72			
TA.TE05	.67			
Optimism		.86	.78	.53
TA.O01	.80			
TA.O02	.85			
TA.O03	.85			
TA.O04	.55			
TA.O05	.53			
Constructive Engagement		.88	.84	.56
TA.CE01	.77			
TA.CE02	.80			
TA.CE03	.75			
TA.CE04	.75			
TA.CE05	.70			
TA.CE06	.73			
Cognitive RFC		.87	.80	.62
RFC1	.84			
RFC2	.87			
RFC4	.69			
RFC5	.74			
Emotional RFC		.84	.72	.64
RFC3	.77			
RFC7	.76			
RFC10	.86			
Intentional RFC		.90	.88	.68
RFC6	.83			
RFC8	.86			
RFC9	.83			
RFC11	.81			
RFC12	.79			

Discriminant validity tests for the lower-order constructs were also conducted to ensure that each reflective construct is distinct from the other constructs in the model. To establish discriminant validity, Fornell-Larcker criterion, cross-loadings of the items, and heterotrait-monotrait (HTMT) ratios were investigated, respectively.

The Fornell-Larcker criterion hypothesizes that "the square root of the AVE of each construct should be higher than the construct's highest correlation with any other construct in the model" (Hair. et al., 2017, p.126). Because this hypothesis was confirmed as presented in Table 4.7, the Fornell-Larcker criterion was satisfied.

Table 4. 7

Bivariate Correlations among Study Variables and Results of Discriminant Analysis Using Fornell-Larcker Criterion

	1	2	3	4	5	6	7	8
1. Job Satisfaction	**.71**							
2. Learning Effectiveness	.46	**.75**						
3. Teaching Effectiveness	.35	.44	**.72**					
4. Optimism	.56	.42	.42	**.73**				
5. Constructive Engagement	.40	.52	.61	.45	**.75**			
6. Cognitive RFC	.18	.34	.24	.23	.31	**.79**		
7. Emotional RFC	.11	.27	.24	.20	.27	.45	**.80**	
8. Intentional RFC	.17	.40	.27	.23	.39	.74	.48	**.82**

Note: The square roots of the average variance extracted (AVE) are shown on diagonal (in bold) and bivariate correlations among constructs are shown on off-diagonal; all correlations were significant at $p < .001$ level (two-tailed).

As an alternative method to evaluate discriminant validity, cross-loadings of each item in the model were investigated. As presented in Table 4.8, all of the indicators loaded higher on the construct they are associated with than the other constructs. Therefore, this finding ascertained the discriminant validity of the constructs in the model.

Table 4. 8

Cross Loadings of Measurement Items

Items	JS	LE	TE	O	CE	Cog.RFC	Emo.RFC	Int.RFC
JS03	**.72**	.32	.23	.44	.29	.10	.09	.10
JS04	**.57**	.21	.19	.35	.19	.03	.04	00
JS05	**.80**	.40	.28	.44	.36	.14	.09	.14
JS06	**.70**	.38	.29	.38	.30	.11	.11	.14
JS07	**.75**	.35	.33	.32	.39	.14	.07	.15
JS08	**.78**	.35	.24	.47	.25	.20	.07	.18
JS09	**.60**	.21	.17	.36	.16	.11	.04	.07
TA.LE01	.37	**.62**	.25	.32	.30	.27	.17	.27
TA.LE02	.39	**.80**	.33	.34	.39	.23	.21	.28
TA.LE03	.29	**.82**	.38	.30	.43	.25	.22	.31
TA.LE04	.35	**.77**	.29	.32	.36	.24	.15	.30
TA.LE05	.31	**.72**	.37	.29	.44	.29	.23	.33
TA.TE01	.25	.31	**.76**	.29	.47	.18	.16	.16
TA.TE02	.27	.42	**.80**	.28	.50	.20	.18	.23
TA.TE03	.20	.28	**.66**	.22	.44	.14	.19	.19
TA.TE04	.25	.28	**.72**	.28	.41	.12	.16	.20
TA.TE05	.29	.28	**.67**	.42	.37	.20	.19	.21

Table 4.8 (continued)

Items	JS	LE	TE	O	CE	Cog.RFC	Emo.RFC	Int.RFC
TA.O01	.52	.39	.29	**.80**	.29	.21	.14	.21
TA.O02	.46	.36	.34	**.85**	.35	.21	.17	.22
TA.O03	.48	.34	.33	**.85**	.35	.15	.19	.16
TA.O04	.26	.18	.28	**.55**	.37	.11	.13	.12
TA.O05	.25	.20	.33	**.53**	.37	.12	.13	.11
TA.CE01	.34	.40	.46	.40	**.77**	.20	.15	.26
TA.CE02	.33	.45	.49	.35	**.80**	.22	.21	.27
TA.CE03	.26	.36	.44	.31	**.75**	.18	.17	.27
TA.CE04	.26	.39	.42	.30	**.75**	.24	.18	.28
TA.CE05	.28	.35	.45	.28	**.70**	.26	.25	.33
TA.CE06	.31	.37	.46	.39	**.73**	.26	.23	.33
RFC1	.12	.30	.18	.14	.28	**.84**	.36	.56
RFC2	.14	.29	.18	.16	.26	**.87**	.40	.62
RFC3	.09	.22	.21	.15	.23	.38	**.77**	.36
RFC4	.02	.18	.16	.12	.19	**.69**	.42	.58
RFC5	.25	.29	.22	.27	.23	**.74**	.27	.60
RFC6	.18	.36	.24	.21	.37	.63	.37	**.83**
RFC7	.05	.18	.16	.14	.17	.29	**.76**	.34
RFC8	.12	.33	.19	.17	.31	.69	.44	**.86**
RFC9	.12	.27	.21	.17	.31	.57	.42	**.83**
RFC10	.10	.24	.2	.19	.24	.40	**.86**	.44
RFC11	.10	.35	.26	.19	.34	.53	.39	**.81**
RFC12	.16	.31	.22	.22	.27	.64	.36	**.79**

Furthermore, the HTMT ratio of correlations, which was proposed as a superior method to investigate discriminant validity compared to the cross-loadings and the Fornell-Larcker criterion (Henseler, Ringle, & Sarstedt, 2015), was applied. Henseler et al. (2015) suggested that the threshold value of HTMT should not exceed .85 and .90 for conceptually distinct and similar constructs, respectively. As reported in Table 4.9, the HTMT ratio of correlation between cognitive and intentional readiness for change is at the critical value of .90. Because the HTMT ratio among these conceptually similar constructs is at the critical level, the researcher further investigated whether the HTMT ratio is significantly different from 1, which indicates high multicollinearity, by utilizing a bootstrapping procedure with 5,000 samples. The resulting bias-corrected and accelerated confidence interval did not include 1 (95% BCa CI [0.85, 0.94]); thus, the collinearity between cognitive and intentional dimensions of the readiness of change was regarded as acceptable. In addition, the

HTMT ratios were below the conservative HTMT threshold value of .85 for the rest of the constructs.

Table 4. 9

Heterotrait-Monotrait Ratio of Correlation between Pairs of First-Order Constructs

	1	2	3	4	5	6	7
1. Job Satisfaction							
2. Learning Effectiveness	.55						
3.Teaching Effectiveness	.43	.55					
4. Optimism	.67	.51	.54				
5. Constructive Engagement	.46	.63	.75	.58			
6. Cognitive RFC	.21	.42	.30	.27	.37		
7. Emotional RFC	.13	.35	.32	.27	.34	.60	
8. Intentional RFC	.19	.47	.33	.27	.45	.90	.60

The results of three assessments, namely the Fornell-Larcker criterion, cross-loadings, and HTMT ratio of correlations, indicated that discriminant validity was established for the lower-order constructs in the model.

4.3.2.2 Assessment of Second-Order Formative Measurement Model

Instead of interpreting the results of the first model that includes just the lower-order constructs (see Figure 3.1), the latent variable scores, which were obtained in the first stage of the disjoint two-stage approach, were saved to the dataset. Then, these scores were used as manifest variables of the higher-order constructs in the second stage of the disjoint two-stage approach (see Figure 3.2).

Before continuing with the structural model evaluation, there was a need to assess the second-order constructs' measurement models. Firstly, potential collinearity issues among the first-order constructs that form the second-order constructs (i.e., teacher agency, readiness for change) were examined by inspecting the variance inflation factor (VIF). As shown in Table 4.10, all of the VIF values were less than the threshold value of 3 (Hair et al., 2019); therefore, multicollinearity was not an issue for the formative second-order constructs in the model.

Table 4. 10

Variance Inflation Factor of Second-order Constructs

Formative constructs and their indicators	VIF
Teacher Agency	
Learning Effectiveness	1.48
Teaching Effectiveness	1.68
Optimism	1.38
Constructive Engagement	1.87
Readiness for Change	
Cognitive RFC	2.30
Emotional RFC	1.34
Intentional RFC	2.39

After checking for the collinearity issues, the next step was to assess the significance and relevance of outer weights. To obtain the significance levels, a bias-corrected and accelerated bootstrapping procedure was utilized with 5,000 subsamples. As shown in Table 4.11, the outer weights of learning effectiveness, optimism, constructive engagement, emotional RFC, and intentional RFC were found significant. Therefore, it can be concluded that these lower-order constructs have relative importance to the higher-order constructs they are associated with. However, it was found that the outer weights of learning effectiveness and cognitive RFC were not significant at the level of .05 because bias-corrected and accelerated confidence intervals for these variables contain zero. By following the recommendations of Hair et al. (2017) about dealing with nonsignificant indicator weights, nonsignificant formative indicators' *absolute contributions* to their constructs were investigated by looking at these indicators' outer loadings. Hair et al. (2017) proposed that a nonsignificant formative indicator should not be removed from the model if its outer loading is above .50, indicating that the indicator is "absolutely important but not as relatively important" (p. 148). Because teaching effectiveness and cognitive RFC have .62 and .81 outer loadings, respectively, these indicators were retained in the model. Moreover, these lower-order constructs have been theorized in the literature as dimensions of the related constructs, so discarding them would have threatened the constructs' contents. Because the weights represent the contribution of each indicator to the associated construct (Chin, 2010), optimism was found to be the construct with the highest relevance with teacher

agency, followed by learning effectiveness, constructive engagement, and teaching effectiveness, respectively. When it comes to the readiness for change, the intentional dimension was the most relevant with this construct, followed by emotional and cognitive dimensions.

Table 4. 11

Formative Constructs' Outer Weights Significance Testing Results

	Outer Weights	Outer Loadings	95% BCa CI	
			LL	*UL*
Teacher Agency				
Learning Effectiveness	.46	.82	.354	.564
Teaching Effectiveness	.07	.62	-.044	.176
Optimism	.48	.81	.377	.580
Constructive Engagement	.26	.75	.137	.367
Readiness for Change				
Cognitive RFC	.16	.81	-.090	. 423
Emotional RFC	.32	.71	.115	.507
Intentional RFC	.68	.94	.418	. 907

Because both the reflective lower-order and formative higher-order constructs exhibited satisfactory levels of quality (i.e., convergent validity, internal consistency reliability, discriminant validity, significance and relevance of outer loadings/weights) as explained above, the researcher continued with the evaluation of the structural model.

4.3.3 Assessment of Structural Model

The purpose of this study was to test a model that investigates the relationships between job satisfaction, teacher agency, and readiness for change and the mediating effect of teacher agency on the impact of job satisfaction on readiness for change. To check whether the relationships and indirect effect were significant at a 95% confidence interval (two-tailed), a bootstrapping procedure with 5,000 iterations was applied.

Before assessing the structural model, multicollinearity issues were first assessed. Per Hair et al.'s (2017) recommendation, VIF values of predictor constructs, namely job satisfaction and teacher agency, were checked. None of the VIF values were found

above the suggested cut-off value of 3. Therefore, it was concluded that collinearity between the predictor constructs was not an issue in the structural model. Then, the researcher proceeded to the assessment of the model's predictive capability.

4.3.3.1 Predictive Capability of the Structural Model

In the PLS-SEM context, the structural model is assessed in terms of its predictive capabilities rather than evaluating how the model fits the data by estimating goodness-of-fit indices, as is the case with CB-SEM. Therefore, coefficients of determination and effect sizes of the constructs were evaluated in this study to investigate the model's capability to predict the variances in the endogenous constructs.

To begin with, the amounts of variance in the teacher agency and the readiness for change constructs explained by their predictor constructs were investigated by looking at the R^2 values. It was found that job satisfaction accounted for 36.6% of the variance in teacher agency, which posed a moderate effect, and the combined effects of job satisfaction and teacher agency explained 20% of the variance in readiness for change, which posed a weak effect.

The structural model's predictive ability was also evaluated by means of the effect size that informs researchers how endogenous construct's R^2 values changes if a certain predictor construct is removed from the model. The results showed that job satisfaction has a large effect size of .577 on teacher agency, whereas it has no effect on readiness for change (f^2 = .015). In addition, the effect size of teacher agency on readiness for change exhibits a medium effect size (f^2 = .212).

4.3.3.2 Hypothesis Testing

After checking the R^2 and f^2 values, the researcher proceeded to hypothesis testing. Table 4.12 presents the hypothesized relationships' standardized path coefficients, *t*-values, *p*-values and bias-corrected, and accelerated bootstrap confidence intervals.

Table 4. 12

Model and Path Coefficients Assessment

	β	*SE*	*t*	*p*	95% BCa CI	
					LL	*UL*
Total effect						
JS → RFC	.174	.04	4.26	.00	.090	.250
Direct effects						
JS → RFC	-.139	.05	3.00	.00	-.228	-.048
JS → TA	.605	.03	24.32	.00	.550	.649
TA → RFC	.517	.04	12.67	.00	.425	.587
Indirect effect						
JS → TA → RFC	.313	.04	10.54	.00	.251	. 366

Note. JS = Job Satisfaction, TA = Teacher Agency, RFC = Readiness for Change

Hypothesis 1: There is a significant and positive association between job satisfaction and readiness for change.

This hypothesis was rejected because a significant and negative direct relationship was found between job satisfaction on readiness for change (β = -.139). More specifically, the teacher feeling more satisfaction from the teaching profession but equally having a sense of agency is estimated to be .139 units lower in his or her reported readiness for change.

Hypothesis 2: There is a significant and positive association between job satisfaction and teacher agency.

Job satisfaction significantly and positively predicted teacher agency (β = .605). This finding implies that the teachers who reported higher job satisfaction also reported higher teacher agency. More specifically, two teachers who differ by one unit on job satisfaction are estimated to differ on teacher agency by .605 units.

Hypothesis 3: There is a significant and positive association between teacher agency and readiness for change.

In the present study, teacher agency was found to be a positive and significant predictor of readiness for change (β = .517). That is to say, two teachers who differ by one unit on teacher agency but who are equally satisfied with their jobs are estimated to differ by .517 units on readiness for change.

Hypothesis 4: Teacher agency mediates the relationship between job satisfaction and readiness for change.

In addition to the direct effects, the indirect effect of teacher agency in the model was also found significant (β = .313) with a bias-corrected and accelerated confidence interval from .251 to .366. That is, two teachers who differ by one unit on their job satisfaction are expected to differ by .313 units on their readiness for change due to the positive effect of job satisfaction on teacher agency which, in turn, affects readiness for change.

After ensuring that there is a significant indirect effect between variables, the type of mediation was determined by following the procedure explained in the previous chapter. Because it was found that the signs of direct and indirect effects are significant but point in the opposite direction, the type of mediation found in the study was competitive mediation.

4.4 Summary of the Results

The mediating role of teacher agency on the relationship between job satisfaction and readiness for change was investigated in this study by utilizing a disjoint two-stage approach. In the first stage, the reflective first-order measurement model was assessed, and all of the constructs were found to have satisfactory quality in terms of convergent validity, internal consistency reliability, and discriminant validity. After that, at the second stage of the two-stage disjoint approach, the second-order formative measurement model was assessed in terms of collinearity issues and the significance and relevance of the indicators. Among the subdimensions of the second-order teacher agency construct, optimism was the most relevant dimension, followed by learning effectiveness and constructive engagement, and teaching effectiveness. As for the readiness for change construct, the intentional dimension was found to be the construct with the highest relevance with the readiness for change, followed by the emotional and cognitive dimensions.

Structural model analysis revealed that both direct and indirect effects in the model are significant. Firstly, a significant, positive relationship was found between job

satisfaction and teacher agency (t = 24.32, p < .01). The results showed that job satisfaction explained 36.6% of the variance in teacher agency, and it has a large effect size on teacher agency (f^2 = .577). Secondly, the findings also suggest that teacher agency has a significant, positive influence on readiness for change (t = 12.67, p < .01) with medium effect size (f^2 = .212). Thirdly, the direct relationship between job satisfaction and readiness for change was negative and significant (t = 3.00, p < .01), although the effect size of job satisfaction on readiness for change was negligible (f^2 = .015). In addition, job satisfaction and teacher agency together explained 20% of the variance in readiness for change. Finally, mediation testing as offered by Zhao et al. (2010) suggested a *competitive mediation* as both mediated effect (β = .313, t = 10.54, p < .001, 95% CI[.251, .366]) and direct effect (β = -.139, t = 3.00, p < .001, 95% CI[-.228, -.048]) are significant but point in opposite directions. This result confirms the mediating role of teacher agency on the relationship between job satisfaction and readiness for change and indicates job satisfaction decreases readiness for change while teacher agency can serve as a buffer to diminish this negative effect.

CHAPTER 5

DISCUSSION

In this chapter, the study results are discussed with reference to the relevant literature, implications are presented separately for each relationship in the study model, and some recommendations for future studies are made.

5.1 Discussion of the Results

This study aimed to investigate the mediating role of the teacher agency construct reflected by teachers' individual beliefs (i.e., learning effectiveness, teaching effectiveness) and attitudes (i.e., optimism, constructive engagement) in the relationship between job satisfaction and teachers' readiness for change. For the study model, PLS-SEM results demonstrated competitive mediation where the direct effect of job satisfaction on readiness for change is of opposite direction as the indirect effect through teacher agency. The results, therefore, suggest that when teachers are more satisfied with their jobs, they feel more agentic in terms of their "initiatives, motivation, and drive to engage in proactive efforts to contribute" to the change (Liu et al., 2016, p. 81), and are more ready for change.

Previous research in the organizational change literature has demonstrated ambiguous results, demonstrating either a negative or positive relationship between job satisfaction and attitudes toward change (Oreg et al., 2011). Although a positive relationship between job satisfaction and attitudes toward change is more prevalent in the literature (e.g., Chih et al., 2012; McNabb & Sepic, 1995; Vakola, 2014, Yousef, 2000; Yousef, 2017), a negative direct relationship between job satisfaction and readiness for change was found in this study. A possible explanation for the negative effect of job satisfaction on readiness for change could be teachers' former change experiences. In a study, Saylık, Saylık, and Sağlam (2021) revealed that Turkish

teachers perceive changes in TES as frequent, standardizing, dulling, and of little avail in the long term. Because previous educational change initiatives make an impression on teachers and have the potential to affect how they evaluate future changes, negative former change experiences may lead to developing negative attitudes toward change (Çalışkan, 2020). This negative relationship can also be explained by the fact that change may be perceived as an opportunity by those dissatisfied with their organizations to bring the organization to the state they want, whereas those who are satisfied with their job may not welcome the change due to the uncertainty it creates and the alterations it brings in the processes and structures the employees are accustomed to (Hardin, 1967; Vakola, 2014; van Dam, 2005). Because Turkish teachers' job satisfaction level was found high with a mean value of 3.04 out of 4, and TES had experienced various unsuccessful change attempts previously, these two explanations toward the negative direct relationship between job satisfaction and readiness for change seem valid. Although this study finding suggests that Turkish public-school teachers who are more satisfied with their profession are less ready for proposed changes than those who are less satisfied, the effect size value (f^2) of .015 indicates that job satisfaction's direct contribution to readiness for change can be neglected, and a mediating mechanism may explain this relationship better.

The existing limited literature regarding the relationship between job satisfaction and teacher agency focuses particularly on the importance of teacher agency to teachers' job satisfaction. It has been suggested that if teachers can use their agency, they are more likely to have a higher level of job satisfaction by considering the teaching profession more valuable than an ordinary job (Priestley et al., 2015, Tao & Gao, 2017). However, Heijden et al.'s (2015) study showed that the opposite direction for the relationship between these constructs is also possible. In their study, teachers who were observed as agents of change were found to have a passion for their profession and enjoy being a teacher. Therefore, job satisfaction was offered as a predictor variable of teacher agency in the present study, and in parallel with Heijden and her colleagues' findings, the results revealed a positive relationship between job satisfaction and teacher agency. In addition to this, a large effect (f^2 = .577) on teacher agency caused by job satisfaction was observed. What does seem conceivable with

these findings is that a teacher who has a higher level of job satisfaction is more likely to present agentic behaviors, such as collaborating with other teachers to increase student learning, disseminating their knowledge, and engaging in activities toward professional learning and school improvement, during change initiatives when compared with a teacher who has a lower level of job satisfaction.

Teachers use their agency through their choices and actions to influence their professional trajectories; thus, teacher agency is strongly associated with different reactions, such as support for, resistance to, and indifference to change (Datnow, 2012; Tao & Gao, 2017). Although teacher agency was found as an important construct that shapes teachers' behaviors during change (e.g., Hökkä & Vähäsantanen, 2014; Jenkins, 2020; Ketelaar et al., 2012; Robinson, 2012), thus far, the direct relationship between teacher agency and readiness for change, which is considered a cognitive precursor for attitudes toward change (Armenakis et al., 1993), has not been investigated. Therefore, the present study contributes to the educational change literature by revealing the positive and significant relationship between teacher agency and readiness for change. Further investigation showed that teacher agency contributes to the teachers' readiness for change with an effect size of .212 that corresponds to a medium effect. Even though there is no direct literature support for this finding due to the lack of previous studies present in the literature regarding the relationship between these constructs, some previous findings have linked readiness for change with the constructs that were conceptualized in this study as the dimensions of teacher agency (i.e., self-efficacy in terms of learning effectiveness and teaching effectiveness, optimism, and constructive engagement). In other words, the previous works demonstrating the contribution of self-efficacy (e.g., Cunningham et al., 2002; Kwakh & Lee, 2008; Rafferty & Simons, 2006) and optimism (e.g., Kartika, Tarigan, & Oktavio, 2021; Kirrane et al., 2017) on readiness for change can be considered as proof of the positive relationship found between agency and readiness. This finding implied that the higher Turkish public school teachers' self-efficacy in their professional learning and teaching effectiveness, and the more optimistic they are, the more they are ready for changes proposed with a policy document through a top-down approach

by MoNE. This proposition seems valid when considering that change may challenge teachers' skills and provoke anxiety for the future (Kondakci et al., 2017).

Considering the suggestion that has been proposed in the literature that the relationship between readiness for change and its antecedents can be better explained by investigating more complex relationships rather than direct relationships (Kondakci et al., 2017; Van Dam et al., 2008; Zayim & Kondakci, 2019), the mediating role of teacher agency was tested in this study. Findings showed that job satisfaction contributed to teachers' readiness for change through their agency levels. Although the direct effect of job satisfaction on readiness for change was found to be negligible, as stated above, this mediating mechanism was found more successful than the direct relationship in predicting readiness for change by explaining the 20% of the variance in readiness. Therefore, it can be asserted that teacher agency represents an appropriate mediator to explain the relationship between job satisfaction and readiness for change. However, Zhao et al. (2010) suggested investigating the signs of direct and indirect effects, in addition to the significance of the indirect effect. By following the procedure for mediation testing proposed by these authors, a competitive mediation, which resulted from a significant negative direct effect between job satisfaction and readiness for change in addition to a significant positive indirect effect over teacher agency, was identified. While this finding is consistent with *Hypothesis 4* of the study, it indicates that there may be other mediating variables in the relationship between job satisfaction and readiness for change that were not included in this study. It should be noted that competitive mediation is a reasonably expected result for this study, as Baron and Kenny (1986) pointed out that obtaining full mediation, termed indirect-only mediation in this study, is unrealistic for social science areas, where many different causalities and relationships may explain the constructs.

The findings of this research also provide important insights into the contribution of subdimensions to the higher-order constructs they are belonged to. In other words, each lower-order construct's relative contribution to forming its higher-order construct could be examined in this study. Accordingly, the intentional dimension contributes the most to the readiness for change construct, followed by emotional and cognitive

dimensions. This outcome is contrary to that of Rafferty et al.'s (2013) proposition that intentions should not be considered as a component of readiness for change. This approach can be criticized by failing to acknowledge the important role played by intentions in readiness for change when considering the commonly held definition of readiness by Armenakis as "beliefs, attitudes, and intentions regarding the extent to which changes are needed and the organization’s capacity to successfully undertake those changes." In addition, this result can be considered somewhat counterintuitive as the least contribution to readiness was resulted from the cognitive dimension. A possible explanation for this might be the high correlation between cognitive and intentional dimensions (r = .90) because bivariate correlations higher than .60 may result in collinearity problems for formative indicators, which in turn they can influence the estimation of weights and significance (Hair et al., 2017). Regarding the teacher agency, the results showed that optimism and learning effectiveness with outer weights of .48 and .46 have higher relevance for forming teacher agency than constructive engagement and teaching effectiveness that have outer weights of .26 and .07, respectively. This finding is in partial agreement with Liu et al.'s (2016) findings which showed that optimism is the most relevant construct with teacher agency, followed by teaching effectiveness, learning effectiveness, and constructive engagement. It can be argued that the reason why the variable teaching effectiveness was found to be the least relevant dimension with teacher agency in this study and the second most relevant dimension in Liu and her colleagues' study is due to the contextual differences between Turkey and China.

5.2 Implications for Practice

The Turkish education system is undergoing change again, as often happens. The agency and readiness of teachers, who are considered implementors of the changes, can be proposed as factors that may affect the change initiative's success. Therefore, the findings of the study have important practical implications by revealing the relationships between job satisfaction, teacher agency, and readiness for change in the midst of the change movement proposed by the Education Vision 2023 document.

First of all, the positive relationship between job satisfaction and teacher agency variables may indicate that higher-order authorities' and school principals' actions that increase teachers' job satisfaction may lead teachers to use their agentic capacities. This is especially important in the current educational change movements where teachers are expected to be active change agents. Although Turkish public-school teachers' job satisfaction levels were found in this study high with a mean value of 3.04 on a 4-point scale, it seems that there are still actions that can be taken to increase their job satisfaction. When the literature on Turkish public school teachers' job satisfaction is considered, some suggestions can be brought forward, such as increasing salary and remuneration (Demir & Arı, 2013; Karataş & Güleş, 2010; Kök, 2006), improving working conditions (Özdayı, 1998), and enhancing organizational justice (Altaş & Çekmecelioğlu, 2015; Tanrıverdi & Paşaoğlu, 2014). Therefore, it can be possible to enhance teachers' agency by adopting the strategies mentioned above and available in the literature to increase their job satisfaction levels.

Teacher agency is considered an important aspect of teachers' professionalism since it is related to their professional learning, teaching, and drive to engage in school-related activities. By reaffirming the positive relationship between teacher agency and job satisfaction (e.g., Everitt, 2020; Heijden et al., 2015; Priestley et al., 2015a; Tao & Gao, 2017), the findings of this study can guide policymakers to focus on the teacher agency dimensions that may affect job satisfaction. For example, as found by Klassen and Chiu (2010), self-efficacy enhances job satisfaction. Therefore, practices toward professional development can contribute to teachers' satisfaction with their profession if they truly believe that they will be better able to carry out professional activities as a result of these professional development programs. In addition, as emphasized previously in the literature, policymakers and school administrators can pave the way for a school context where teachers can enact agency to increase their satisfaction level since having a sense of agency makes teachers perceive their profession more meaningful than an ordinary job (Priestley et al., 2015a).

The results also showed that teacher agency might be another predictor for readiness for change. Therefore, school administrators and policymakers should give importance

to the dimensions of teacher agency to foster teachers' readiness for change. As educational change movements generally encompass elements that pose challenges for teachers, and people are reluctant to attempt a change if they do not have confidence in their abilities to cope with these challenges, teachers' self-efficacy toward professional learning and their teaching, which were conceptualized as dimensions of agency, should be promoted with effective school leadership and in-service training programs. In addition, since it is found to be the most relevant dimension of teacher agency, school administration should give due consideration to teachers' optimism, which is associated with a positive outlook for the future and good relationships with co-workers. Therefore, to foster teachers' optimism, school leaders and MoNE may consider benefiting from the change message components offered by Armenakis et al. (1999). Firstly, the desired end-state envisioned by the change, which is expected to be better than the current state, can be portrayed by emphasizing the discrepancies between these states and the valence of change for the teachers. Secondly, a change message that conveys top management's support may enhance teachers' optimism about the future success of the change movement and motivate them to be active agents of change. This is especially important because teachers who have experienced many change initiatives in their careers may be unwilling to contribute to the change even if they have a higher agency level until they receive support from top management.

In addition to the practical implications mentioned above, this study also offers methodological implications by encouraging social sciences researchers to use PLS-SEM (1) when non-parametric approaches are more appropriate for the data obtained (e.g., nonnormally distributed residuals, small sample size), (2) when model parsimony for complex study models is sought (e.g., using hierarchical component models), (3) when the research objective is to investigate the predictive value of exogenous variables, and (4) when the study incorporates formatively measured constructs. Instead of blindly using covariance-based structural equation modeling, which is the dominant approach to investigate relationships in social science, researchers may consider benefiting from PLS-SEM, of which usage is increasing in many social science fields, such as organizational management (e.g., Sosik, Kahai, & Piovoso, 2009), marketing (e.g., Nakata, Zhu, & Izberk-Bilgin, 2011), and education

(e.g., Shafaei, Nejati, & Abd Razak, 2018; Thien, 2020; Velarde, Ghani, Adams, & Cheah, 2020) with the increasing number of user-friendly software (e.g., SmartPLS, PLS-Graph, semPLS and plspm packages of R).

Also, as one of the first research on teacher agency in Turkey, the present study will hopefully arouse curiosity for this concept among Turkish researchers and encourage them to investigate the role of teacher agency in educational change. Moreover, this study contributed to the Turkish literature by supporting the validity of the newly developed Teacher Agency Scale (Bellibaş et al., 2019).

5.3 Recommendations for Future Research

There are some recommendations for future research based on the limitations of the current study.

First of all, to resolve the limitation regarding the sample's representativeness and thus the generalizability of the findings due to the non-probabilistic convenience sampling method adopted in this study, future studies may consider randomized sampling. The fact that this study included only public-school teachers is another limitation for the generalizability of the results. Therefore, including private school teachers in the sample of the future studies would provide additional insight by allowing comparison between school types.

In this study, the only demographic variable that was found to cause significant variance in some of the study variables (i.e., teacher agency dimensions) was the school level where the teachers work (i.e., primary, secondary, high school). However, the variables included in the study model were unable to explain the mechanism why there were statistically significant differences between school levels in terms of teacher agency dimensions. Therefore, future studies may include additional variables that can reveal why some dimensions of teacher agency differ by school level and may utilize data collection methods allowing them to identify school level breakdown of teachers. If this recommendation is taken into account, multilevel structural equation modeling can be preferred since it will enable researchers to investigate complex relationships between study variables on different levels.

The competitive mediation between job satisfaction and readiness for change through teacher agency found in this study points out that additional research is needed to discover other mediator variables apart from teacher agency in the relationship between these variables. Also, considering that teacher agency was conceptualized more as a capacity in this study even though it is related to the interplay between teachers' capacity and the context they are in, some contextual variables that are related to agency and may affect readiness for change should be considered for future studies as mediator variables. For instance, trust (Jenkins, 2020; Willis et al., 2019), school culture (Soini, Pietarinen, & Pyhältö, 2016; Toom et al., 2015; Willis et al., 2019), collegial relationships (Robinson, 2012), and leadership (Pantić, 2015) can be some of the potential contextual variables for future studies that aim to take an ecological perspective of the agency.

Additionally, due to the cross-sectional nature of the study design, it is not possible to demonstrate causality. Therefore, future studies may consider collecting longitudinal data at different stages of change initiatives to establish causal relationships between pairs of variables that were found to have significant associations in this study.

Also, researchers may consider integrating qualitative methodologies into the study design and adopting a mixed-methods study design to gain better insight. This would help researchers overcome the limitations associated with self-reported data and mono-method bias because using various methodologies and data sources may provide additional depth and richness to the study (Creswell & Clark, 2017).

Finally, as stated at the end of the third chapter, using hierarchical component models allowed parsimony in the study model by reducing the complexity. However, it also resulted in the loss of information since the indirect relationships between the higher-order constructs, which are teacher agency and readiness for change in this study, and the lower-order constructs that form the higher-order constructs were eliminated. Depending on the research questions, future studies may consider reporting the findings obtained in the first stage of the disjoint two-stage approach to demonstrate the underlying mechanism more clearly in these relationships.

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APPENDICES

A. APPROVAL OF METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

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Sayı: 28620816 /179

16 HAZİRAN 2020

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Yaşar KONDAKÇI

Danışmanlığını yaptığınız **Anıl ERSÖZ'ü "İlk ve Ortaöğretim Okullarında Çalışan Öğretmenlerin Örgütsel Değişime Hazır Olmaları İle Öğretmenlerin Faillik Düzeyleri ve İş Doyumları Arasındaki İlişkinin İncelenmesi"** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **179 ODTU 2020** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

B. APPROVAL OF ISTANBUL PROVINCIAL DIRECTORATE OF NATIONAL EDUCATION

TG

T.C.
İSTANBUL VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı :E.59090411-44-15878817 02.11.2020
Konu : Anket Araştırma İzni

ORTA DOĞU TEKNİK ÜNİVERSİTESİ REKTÖRLÜĞÜNE
(Sosyal Bilimler Enstitüsü Müdürlüğü)

İlgi : a) 13.10.2020 tarihli ve 244 sayılı yazınız.
b) Valilik Makamının 27.10.2020 tarihli ve 15685091 sayılı oluru.

Üniversiteniz Yüksek Lisans Öğrencisi Anıl ERSÖZ'ün **"Devlet Okullarında Çalışan Öğretmenlerin Faillikleri ve Değişime Hazır Olma Durumları Arasındaki İlişkide İş Doyumunun Aracılık Rolü"** konulu tez araştırma çalışması hakkındaki ilgi (a) yazınız ilgi (b) valilik onayı ile uygun görülmüştür.

Bilgilerinizi ve araştırmacının söz konusu talebi; bilimsel amaç dışında kullanmaması, **uygulama sırasında bir örneği müdürlüğümüzde muhafaza edilen mühürlü ve imzalı veri toplama araçlarının kurumlarımıza araştırmacı tarafından ulaştırılarak uygulanılması,** katılımcıların gönüllülük esasına göre seçilmesi, araştırma sonuç raporunun kamuoyuyla paylaşılmaması koşuluyla, gerekli duyurunun araştırmacı tarafından yapılması, okul idarecilerinin denetim, gözetim ve sorumluluğunda, eğitim-öğretimi aksatmayacak şekilde ilgi (b) Valilik Onayı doğrultusunda uygulanması ve işlem bittikten sonra 2 (iki) hafta içinde sonuçtan Müdürlüğümüz Strateji Geliştirme Bölümüne rapor halinde bilgi verilmesini arz ederim.

Levent ÖZİL
İl Milli Eğitim Müdürü a.
Müdür Yardımcısı

Ek:
1- Valilik Onayı
2- Ölçekler

Adres: İstanbul Millî Eğitim Müdürlüğü - Strateji Geliştirme Şb.Md.
Binbirdirek Mh.İmran Öktem Cd. No:1 Sultanahmet-Fatih/İstanbul
Elektronik Ağ: istanbul.meb.gov.tr
e-posta: ist.sgb34@gmail.com

Bilgi için: Aykut ÇELİK
Tel: [redacted]
Faks: 0 (___) ___ __ __

Bu evrak güvenli elektronik imza ile imzalanmıştır. https://evraksorgu.meb.gov.tr adresinden 8c22-bd8d-382f-ade4-b207 kodu ile teyit edilebilir.

C. INFORMED CONSENT FORM

Bu araştırma, ODTÜ Eğitim Yönetimi ve Planlaması Bölümü Yüksek Lisans öğrencisi Anıl Ersöz tarafından Prof. Dr. Yaşar Kondakçı danışmanlığındaki yüksek lisans tezi kapsamında yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir?

Öğretmenlerin değişime hazır olma durumlarını etkileyen faktörlerin incelenmesidir.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?

Araştırmaya katılmayı kabul ederseniz, size verilecek olan anketlerde yer alan bir dizi soruyu derecelendirme ölçeği üzerinde yanıtlamanız beklenmektedir. Bu çalışmaya katılım ortalama 15 dakika sürmektedir.

Sizden Topladığımız Bilgileri Nasıl Kullanacağız?

Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik veya kurum belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Katılımcılardan elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayınlarda kullanılacaktır. Sağladığınız veriler gönüllü katılım formlarında toplanan kimlik bilgileri ile eşleştirilmeyecektir.

Katılımınızla ilgili bilmeniz gerekenler:

Sizlere dağıtılacak olan ölçekler, 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 araştırmacıya, anketi tamamlamadığınızı söylemek yeterli olacaktır.

Araştırmayla ilgili daha fazla bilgi almak isterseniz:

Anket sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Orta Doğu Teknik Üniversitesi Eğitim Yönetimi ve Planlaması Bölümü öğretim üyelerinden Prof. Dr. Yaşar Kondakçı (e-posta: @metu.edu.tr) ya da Anıl Ersöz (e-posta: @metu.edu.tr) ile iletişim kurabilirsiniz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum.

(Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Ad Soyad	Tarih	İmza
	---/----/-----	

D. PERMISSION TO USE TEACHER AGENCY SCALE

öğretmen failliği ölçeği Gelen Kutusu ×

Yasar Kondakci [redacted]@metu.edu.tr gmail.com … 4 Eki 2019 Cum 09:28

Alıcı: sedat, Mehmet, omer, ben

Değerli hocalarım,
Sizin öğretmen failliği ölçeğini öğrencim Anıl Ersöz'ün tez çalışması kapsamında kullanmak istiyoruz. Bu sebeple, ölçeğin bir kopyasını gönderirseniz çok sevinirim.
Şimdiden teşekkür eder, iyi çalışmalar dilerim.

--
Yasar KONDAKCI, PhD
Prof. in Educational Administration & Planning
Department of Educational Sciences
Faculty of Education
[redacted]
E-mail: [redacted]@metu.edu.tr

sedat gumus <[redacted]@gmail.com> 4 Eki 2019 10:03

Alıcı: Yasar, Mehmet, omer, ben

Sayın Hocam,

Ölçeği kullanmanızdan mutluluk duyarız. Ekteki makalenin sonunda ölçek maddeleri mevcut. Ancak, word belgesi olarak benim mevcut bilgisayarımda yok. Ömer hoca size hem word belgesini hem de gerekirse analizlerle ilgili ek bilgileri sağlayacaktır.

Kolarlıklar diliyorum.
Sedat

PDF Bellibaş, Çalışkan, …

E. PERMISSION TO USE READINESS FOR CHANGE SCALE

Anket kullanım izni Gelen Kutusu ×

anıl ersöz <[redacted]@metu.edu.tr> 7 Eki 2020 Çar 10:05

Alıcı: Yasar

Merhaba Yaşar Hocam,

Geliştirdiğinz Değişime Hazır Olma Ölçeğini, İş tatmini, Öğretmen Failliği ve Değişime Hazır Olma arasındaki ilişkiyi incelemeyi amaçladığım tez çalışmamda kullanmak için izninizi isterim.

Saygılar

Anıl Ersöz

Yasar Kondakci <[redacted]@metu.edu.tr> 7 Eki 2020 Çar 10:44

Alıcı: anıl

Anıl merhaba,
Ölçeği ekte iletiyorum.
Şimdiden başarılar dilerim.

•••

--
Yasar KONDAKCI, PhD
Professor in Educational Administration & Planning
Dean of the Graduate School of Social Sciences
Middle East Technical University

[redacted]

E-mail: [redacted]@metu.edu.tr

Readiness for chan...

F. PERMISSION TO USE JOB SATISFACTION SCALE

anıl ersöz <[redacted]@metu.edu.tr> 6 Eki 2020 Sal 11:23

Alıcı: esin

Sayın Esin Tezer,

ODTÜ Eğitim Yönetimi ve Planlaması bölümü yüksek lisans öğrencisi olarak Yaşar Kondakçı danışmanlığında hazırlayacağım ve devlet okullarında çalışan öğretmenlerin iş doyumları ve değişime hazır olma durumları arasındaki ilişkide öğretmen failliğinin aracılık rolünü incelemeyi amaçladığım tez çalışmamda sizin geliştirmiş olduğunuz İş Doyumu Ölçeğini kullanmak için izninizi isterim.

Saygılar.

Anıl Ersöz

esin <[redacted]@metu.edu.tr> 6 Eki 2020 Sal 12:40

Alıcı: anıl

Merhaba Anıl,

İş Doyumu Olçeği ve olcekle ilgili bilgileri ekte gonderiyorum.

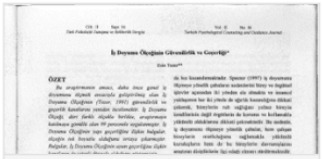
Basarilar dilerim.

Samsung Galaxy akıllı telefonumdan gönderildi.

-------- Orijinal mesaj --------
Kimden: anıl ersöz <[redacted]@metu.edu.tr>
Tarih: 06.10.2020 11:24 (GMT+03:00)
Alıcı: [redacted]@metu.edu.tr
Konu: Ölçek kullanım izni

...

2 Ek



PDF Is Doyumu makale....

W Is Doyumu Olcegi.d...

G. DEMOGRAPHIC INFORMATION FORM

Kısım I. Bu kısımda sizinle ilgili genel bilgiler sorulmaktadır. Lütfen her bir maddeyi okuyup durumunuzu en iyi yansıtan seçeneği çarpı işareti (X) ile işaretleyiniz.

Cinsiyet	☐ Kadın	☐ Erkek
Yaş	_____	
Medeni hali	☐ Evli	☐ Bekar
Çocuğunuz var mı?	☐ Evet	☐ Hayır
Okulunuzun hizmet verdiği öğretim düzeyi	☐ İlkokul ☐ Ortaokul ☐ Lise	
Meslekteki yılınız	_____	
Mesleki durumunuz	☐ Kadrolu ☐ Sözleşmeli ☐ Vekil ☐ Diğer (Belirtiniz): _____	
Branşınız	_____	
Şimdiye kadar herhangi bir idari görev yürüttünüz mü?	☐ Evet	☐ Hayır
Yürüttüğünüz idari görevler	☐ Müdür ☐ Müdür yardımcısı ☐ Müdür muavini ☐ Diğer (Belirtiniz): _____	
Okulunuzdaki yaklaşık öğrenci sayısı	_____	
Şu ana kadar herhangi bir hizmet içi eğitim aldınız mı?	☐ Evet	☐ Hayır
Şu ana kadar herhangi bir kurumsal değişim projesinde yer aldınız mı?	☐ Evet	☐ Hayır

H. SAMPLE ITEMS FROM TEACHER AGENCY SCALE

1. Yeterince sıkı çalışırsam, öğretim becerilerimi geliştirmeye devam edebilirim. (Learning Effectiveness dimension)
2. Gerçekten çok çabaladığımda, en zor öğrencilere bile ulaşabilirim. (Teaching Effectiveness dimension)
3. Genelde, meslektaşlarımla olumlu ilişkiler içerisindeyim. (Optimism dimension)
4. Okulun değişim süreçlerinde, mesleki etkimi ortaya koymak için elimden gelenin en iyisini yaparım. (Constructive Engagement dimension)

I. SAMPLE ITEMS FROM READINESS FOR CHANGE SCALE

1. Değişim, işimi daha iyi yapmama yardımcı olacaktır. (Cognitive dimension)
2. Değişim genellikle hoşuma gitmez. (Emotional dimension)
3. Değişim sürecinin başarısı için elimden geleni yapmak isterim. (Intentional dimension)

J. SAMPLE ITEMS FROM JOB SATISFACTION SCALE

1. İşinizi ne derece seviyorsunuz?
2. Yapmakta olduğunuz işi en sevdiğiniz arkadaşınıza ne derece tavsiye edersiniz?

K. TURKISH SUMMARY / TÜRKÇE ÖZET

1. GİRİŞ

Sürekli değişen dünyada örgütlerin rekabet edebilmesi, hizmet kalitelerinin artırılması, etkin ve hayatta kalmaları için sıklıkla değişmeleri gerekmektedir. En geniş anlamda örgütsel değişim, bir organizasyonun mevcut durumunu istenen bir duruma dönüştürmek için örgütün yapı veya davranışlarındaki herhangi bir başkalaşma olarak tanımlanabilir (Bowditch & Buono, 2001; Pettigrew, 1990). Eğitim örgütleri de PISA gibi uluslararası değerlendirme programları, eğitimde uluslararasılaşma, iş piyasası, teknoloji, yasa ve yönetmeliklerde gerçekleşen değişiklikler (Kondakci, 2020; Lunenburg, 2010) gibi etkiler yüzünden değişmek zorundadırlar. Fakat, değişim girişimlerinin çoğunda ya sınırlı başarı elde edilebilmekte ya da başarısız olunmaktadır (George vd., 2007). Örgütsel değişim alan yazınında, değişim girişimlerinde istenilen sonuçların alınamamasının önemli bir nedeni, değişimin teknik yanlarına odaklanırken örgütlerde yer alan bireylerin rollerinin öneminin azımsanması olarak belirtilmiştir (Greenhalgh vd., 2004).

Örgütsel değişim ne kadar gerekli ve kaçınılmaz olursa olsun, değişim çalışanlar için bilinmedik ve belirsiz durumlar ortaya koyduğundan (Burke, 2008) ve çalışanların profesyonel kimliklerini düzenlemeye ittiğinden (Vähäsantanen & Eteläpelto, 2009), değişim çalışanlar tarafından bir tehdit olarak algılanabilir. Dolayısıyla örgütler, değişimin başarıya ulaşması için çalışanlarının değişime olumlu tutumlar geliştirmesini sağlamalıdır (Choi, 2011). Alan yazında değişime yönelik birçok tutum incelenmiş olup bunlardan en çok göze çarpanları değişime bağlılık, değişime açıklık, değişime direnç, değişime yönelik sinizm ve değişime hazır olmadır. Bunlar arasında değişime hazır olma, değişimin öncüsü olarak düşünüldüğünden ayrı bir öneme sahiptir (Armenakis vd., 1993). Bu tutumun önemi Weiner (2009) tarafından ileri sürülen ve yeterli düzeyde değişime hazır olunmamasından dolayı değişim girişimlerinin yarısının başarısızlıkla sonuçlandığı savı ile daha iyi anlaşılabilir.

Değişime hazır olma, bireylerin mevcut durumu kasıtlı olarak değiştirmek üzere bir planı kabul etme, sahiplenme ve hayata geçirmeye bilişsel ve duygusal olarak meyilli olma düzeyidir (Holt vd., 2007). Bu tanıma göre değişime hazır olma bilişsel, duygusal ve kararlılık boyutlarından oluşan çok boyutlu bir yapıdır (Piderit, 2000).

Eğitim sistemlerindeki değişim girişimleri çoğunlukla öğrencilerin öğrenmesini artırmaya yönelik yeni yaklaşımları kapsar ve öğretmenlerin mesleki gelişimi ile okul gelişimini amaçlar. 2023 Eğitim Vizyonu belgesi (MoNE, 2018) ile öngörülen değişiklikler de bu doğrultuda düşünülebilir. Hedeflenen bu değişikliklerin başarıyla gerçekleştirilmesi ihtimali, değişimin gerektirdiği doğrultuda alandaki yenilikleri takip ederek mesleki açıdan kendisini geliştiren, meslektaşlarıyla faydalı ilişkiler kuran ve okul gelişim süreçlerine katılım gösteren öğretmenlerin olmasıyla artmaktadır (Bellibaş vd., 2019). Bu davranışlar, öğretmenlerin karşılaştığı farklı bağlamlarda ve durumlarda mesleki değerlerine, inançlarına, hedeflerine ve bilgilerine göre hareket etme istekliliği olarak tanımlanabilecek öğretmen failliği kavramıyla ilişkilidir (Toom, vd., 2015). Dolayısıyla, öğretmen failliğinin öğretmenlerin değişime hazır olma durumlarıyla ilişkili olduğu öne sürülebilir. Alan yazında, faillik ile değişim arasındaki ilişkinin çoğunlukla pozitif yönlü olduğunu öne süren araştırmalar olsa da (Priestley, vd., 2012) bazı araştırmalar öğretmenlerin faillik davranışlarını değişimi eleştirmek ve değişime direnç göstermek için de kullandığını ortaya koymuştur (Sannino, 2010). Dolayısıyla, Türk eğitim sisteminde olduğu gibi merkezi eğitim sistemleri öğretmenleri her ne kadar değişim süreçlerinde dışlıyor olsa da öğretmenlerin değişimi ya aktif olarak destekleyerek ya pasif bir şekilde kabul ederek ya da değişimi reddederek değişim sürecinde faillik davranışları sergiledikleri söylenebilir (Datnow, 2012).

Liu, Hallinger ve Feng (2016) öğretmen failliğini öğretmenlerin kapasitesi olarak kavramsallaştırmış ve bu kavrama yönelik öğrenme etkililiği, öğretme etkililiği, iyimserlik ve yapıcı katılım boyutlarını ortaya koymuşlardır. Öğrenme etkililiği, öğretmenlerin mesleki gelişime yönelik öz yeterlikleri ile ilişkilidir. İkinci boyut olan öğretme etkililiği ise olumsuz koşullar altında bile öğrencilerin öğrenmelerini sağlamaya yönelik öz yeterliklerini yansıtmaktadır. İyimserlik boyutu ise hem iyimser

bir kişiliğe hem de meslektaşlarla iyi ilişkilere sahip olmak ile ilgilidir. Son boyut olan yapıcı katılım boyutu, öğretmenlerin mesleki gelişimlerine yönelik hedefler koyması, bu hedeflere yönelik çaba göstermesi ve yeni fikirler denemeye ve değişime katkıda bulunmaya yatkınlıkları ile ilişkilidir. Bu kavramsallaştırmanın yanı sıra Priestley, Biesta ve Robinson'un (2015) ortaya koyduğu ekolojik bakış açısı öğretmen failliğini, öğretmelerin kapasitesi ile bulundukları bağlam arasındaki etkileşimle şekillenen ve öğretmenlerin geçmişlerinden, geleceğe yönelik yönelimlerinden ve mevcut durum ile bağlarından farklı derecelerde etkilenmesiyle ortaya çıkan bir olay olarak kavramsallaştırır. Öğretmen failliğine yönelik bu yaklaşımlar göz önünde bulundurulduğunda, işten beklentiler ile işten elde edilenler arasındaki uyumla alakalı duygusal bir durum olan iş doyumunun faillik ile ilişkili bir kavram olduğu söylenebilir. Bu ilişkiye yönelik öğretmen failliği alan yazınında, faillik algısına sahip öğretmenlerin yaptıkları işi daha anlamlı gördükleri ve daha fazla iş doyumuna sahip oldukları belirtilmiştir (Priestley vd., 2015). Buna ek olarak, iş doyumu yüksek olan öğretmenlerin değişim süreçlerinde daha fazla faillik davranışları sergiledikleri gözlemlenmiştir (Heijden vd., 2015).

Sonuç olarak, öğretmenlerin faillik ve iş doyumu düzeylerinin onların değişime yönelik tutumlarını belirleyebileceği düşünülmektedir. Dolayısıyla, öğretmen failliğini değişim girişiminin önemli bir aracısı olarak gören (Datnow, 2012; Priestley vd., 2012) ve değişime yönelik tutumlar ile bunların öncülleri arasındaki ilişkilerin doğrudan ilişkilerden ziyade dolaylı ilişkiler ile daha iyi açıklanacağını öne süren (Kondakci vd., 2017; Van Dam vd., 2008; Zayim & Kondakci, 2019) güncel alan yazın göz önünde bulundurularak, bu çalışmanın kavramsal modeli, öğretmenlerin iş doyumları ile değişime hazır olma durumları arasındaki ilişkide faillik algılarının aracılık rolünü inceleyecek şekilde oluşturulmuştur.

1.1. Çalışmanın Amacı

Bu çalışmanın amacı, devlet okullarında çalışan öğretmenlerin iş doyumları ile değişime hazır olma durumları arasındaki ilişkide öğretmen failliğinin aracılık rolünü incelemektir.

1.2. Çalışmanın Önemi

Bu çalışmanın iş doyumu, öğretmen failliği ve değişime hazır olma arasındaki ilişkileri ortaya çıkararak veya önceki araştırmalardan elde edilen bulguları teyit ederek örgütsel değişim literatürüne katkı sağlayacağı düşünülmektedir. Daha önce belirtildiği üzere birçok değişim girişiminde teknik yönlere odaklanılırken örgüt içindeki bireylerin ihmal edilmesinden dolayı başarısız olunmaktadır. Örgütsel değişimin ancak üyelerinin değişimiyle mümkün olduğu dikkate alındığında (Schneider vd., 1996) bu çalışma birey düzeyindeki değişkenlere odaklanarak literatürdeki bu boşluğun doldurulmasına katkıda bulunacaktır.

Örgütsel değişim literatüründe az sayıda çalışma değişime hazır bulunuşluk kavramının öncülleri ile ilgilidir (Rafferty vd., 2013) ve bu çalışmaların çoğu doğrudan ilişkilere odaklanmıştır (Vakola vd., 2013). Kişilik özelliklerinin ise literatürde en çok incelenen değişime hazır bulunuşluk öncülleri olduğu göze çarpmaktadır (Vakola vd., 2013). Dahası, değişime hazır bulunuşluk ile ilgili öncülleri inceleyen araştırmaların çoğu biliş ve düşüncelere ağırlık verip duyguları göz ardı etmiştir (Rafferty vd., 2013). Bu sebeple, bu çalışmanın duygularla ilişkili bir yapı olarak kavramsallaştırılan iş doyumu ile değişime hazır olma durumu arasındaki ilişkide bilişsel, duygusal ve davranışsal boyutlardan oluşan öğretmen failliğinin aracılık rolünü inceleyerek alanyazına katkıda bulunması beklenmektedir. Ayrıca, iş doyumunun literatürde yordayıcı değişkenden ziyade çoğunlukla bağımlı değişken olarak ele alındığı (Zayim-Kurtay & Kondakci, 2019) ve iş doyumu ile değişime yönelik tutumlar arasındaki ilişkinin literatürde halen muğlak olduğu belirtilmiştir (Claiborne vd., 2013; Vakola, 2014). İş doyumunu, değişime hazır bulunuşluk kavramının bir yordayıcısı olarak öne süren bu çalışma ortaya sunacağı ampirik bulgularla önceki çalışmalara destek olacaktır.

Önceden belirtildiği gibi öğretmenler iş yaşamlarında birçok hususta faillik davranışları sergilemelerine rağmen eğitimsel değişim süreçlerinde öğretmen failliğinin rolüne yönelik çok az bulgu bulunmaktadır (Pantić, 2015). Benzer şekilde, Priestley, Biesta ve Robinson (2015a) eğitimsel değişim literatüründe öğretmen failliği kavramının yetersiz kuramsallaştırıldığını ve hatta yanlış anlaşıldığını iddia

etmişlerdir. Dolayısıyla, bu çalışmanın bulguları öğretmen failliği ile değişime hazır bulunuşluk kavramları arasındaki bağlantıyı göstererek eğitimsel değişim literatürüne katkıda bulunacaktır.

Ek olarak, Türkiye bağlamında öğretmen failliği kavramını içeren ilk çalışmalardan biri olan bu çalışmanın araştırmacıların bu kavrama yönelik meraklarını ve ilgilerini uyandırması umulmaktadır. Ayrıca, değişim girişimlerinde aktif rol alan öğretmenlere sahip olmak için öğretmen failliği kavramına yönelik anlayışın geliştirilmesi önemli bir konu haline gelmektedir (Bellibaş vd., 2019). Dolayısıyla, bu çalışma, öğretmen failliği, iş doyumu ve değişime hazır olma arasındaki ilişkileri ortaya koyarak politika yapıcıların stratejiler ve politikalar oluşturmasına ve gelecekteki değişim hareketleri için ivme yaratmasına yardımcı olabilir.

2. YÖNTEM

2.1. Araştırmanın Deseni

İlişkisel bir model olarak tasarlanan bu çalışmada iş doyumu, öğretmen failliği ve değişime hazır bulunuşluk arasındaki ilişkiler ile iş doyumu ile değişime hazır bulunuşluk arasındaki ilişkide öğretmen failliğinin aracılık rolü incelenmektedir.

2.2. Örneklem ve Örneklem Seçimi

Her ne kadar ilk olarak iki aşamalı rastgele örnekleme yöntemi kullanılarak İstanbul ilinin 10 ilçesindeki okulların %20'si veri toplamak üzere belirlenmiş olsa da COVID-19 salgını nedeniyle ülke genelinde uygulanan kısıtlamalar araştırmacının yüz yüze kağıt-kalem formatında veri toplamaya devam etmesine izin vermemiştir. Dolayısıyla, kullanılan ölçeklerin çevrimiçi versiyonları oluşturulup araştırmanın örneklemi Türkiye genelinde ilköğretim ve ortaöğretim düzeyindeki devlet okullarında çalışan öğretmenler olarak değiştirilmiştir.

Tablo 3.1'de görülebileceği üzere araştırmaya 241 ilkokul, 269 ortaokul ve 162 lise öğretmeni olmak üzere toplamda 672 öğretmen katılmıştır. Katılımcıların çoğunu kadınlar oluştururken (%75,6) katılımcıların yaş ortalaması 38,6 yaş ve öğretmenlik mesleğindeki tecrübelerin ortalaması 14,95 yıldır. Katılımcıların %69'u 2023 Eğitim

Vizyonu belgesi ile öngörülen değişikliklere yönelik herhangi bir hizmet içi eğitime katılmadıklarını, %56,6'sı ise kariyerlerinde şu ana kadar hiçbir idari görevde bulunmadıklarını belirtmişlerdir.

2.3. Veri Toplama Araçları

İş Doyumu Ölçeği: Tezer (1991) tarafından geliştirilen tek boyutlu ölçek 4'lüi Likert tipi derecelendirme ile hazırlanan 10 maddeden oluşmaktadır ve çalışanların genel iş doyumunu ölçmektedir. Tezer 2001 yılında ölçeğin güvenirlik ve geçerlilik kanıtlarını yeniden incelemiş ve tek boyutlu faktör yapısını doğrulamıştır. Bu çalışmada ölçeğin iç tutarlık katsayısı .81 olarak raporlanmıştır ve iş doyumuna yönelik iki farklı ölçek üzerinden uyum geçerliliğine yönelik kanıtlar sunulmuştur.

Öğretmen Failliği Ölçeği: Liu, Hallinger ve Feng (2016) tarafından geliştirilen ve Bellibaş, Çalışkan ve Gümüş (2019) tarafından Türkçeye uyarlanan ölçek Öğrenme Etkililiği boyutundan 6, Öğretme Etkililiği boyutundan 7, İyimserlik boyutundan 5, ve Yapıcı Katılım boyutundan 6 olmak üzere toplamda 24 madde içermektedir. Ölçekte 5'li Likert tipi derecelendirme kullanılmıştır. Alt boyutlara ait iç tutarlılık katsayılarının .72 il .83 arasında olduğu ve doğrulayıcı faktör analizi ile elde edilen uyum indekslerinin kabul edilebilir olduğu ($\chi2$ = 511.376, sd = 239, $\chi2$/sd = 2.14, RMSEA= .05, SRMR= .07, CFI = .91) raporlanmıştır. Yazarlar bu ölçeğin ilkokul, ortaokul ve liselerde çalışan öğretmenlerin faillik düzeylerinin belirlenmesinde kullanılabilecek geçerli ve güvenilir bir ölçme aracı olduğunu ifade etmiştir.

Değişime Hazır Olma Ölçeği: Öğretmenlerin değişime hazır olma düzeylerini belirlemek amacıyla Kondakçı, Zayim ve Çalışkan (2013) tarafından geliştirilen ölçek Bilişsel, Duygusal ve Kararlılık boyutlarında sırasıyla 4, 3 ve 5 madde içermektedir. Araştırmacılar gerçekleştirdikleri keşfedici faktör analiziyle, literatürde önerildiği gibi değişime hazır olma kavramının üç faktör altında toplandığını gözlemlemiş ve gerçekleştirdikleri doğrulayıcı faktör analizi ile üç faktörlü yapıyı doğrulamışlardır ($c^2(49)$ = 206.40, c^2/ d*f* = 4.21, CFI=.97, RMSEA=.07, NNFI=.954). Ayrıca, iç tutarlılık katsayıları bilişsel boyut için .87, duygu boyutu için .75 ve kararlılık boyutu için .90 olarak belirtilmiştir.

Demografik Bilgi Formu: Araştırmacı tarafından hazırlanan demografik bilgi formu ile katılımcılar ve çalıştıkları okullar hakkında bilgiler toplanmıştır.

2.4. Veri Toplama Süreci

Çalışmada kullanılan veriler, 2020-2021 öğretim yılı güz döneminde toplanmıştır. Verileri toplamadan önce, ODTÜ İnsan Araştırmaları Etik Kurulu'ndan (Ek A) ve İstanbul Valiliği İl Milli Eğitim Müdürlüğü'nden (Ek B) gerekli izinler alınmıştır. İstanbul ilindeki okullardan iki aşamalı küme örneklemesi kullanılarak belirlenen okullar ziyaret edilerek okul müdürleri araştırma hakkında bilgilendirilmiş ve ölçeklerin öğretmenler odasında uygulanması için izinleri alınmıştır. Öğretmenlerin gönüllü katılım formunu (Ek C) doldurmasıyla tamamlanması yaklaşık 15 dakika süren ölçekler öğretmenlere uygulanmıştır. Ancak, COVID-19 salgını nedeniyle ülke genelinde uygulanan kısıtlamalar araştırmacının yüz yüze kağıt-kalem formatında veri toplamaya devam etmesini mümkün kılmamıştır. Dolayısıyla, kullanılan ölçeklerin çevrimiçi versiyonları oluşturulup belirlenen okulların müdürlerinden okulun iç haberleşme kanalları vasıtasıyla (ör., WhatsApp grupları, e-posta listeleri) ölçekleri öğretmenlere ulaştırmaları istenmiştir. Araştırmaya katılımın bu yöntem ile hedeflenen düzeyin çok altında kalması ve vakit darlığı sebebiyle bu ölçeklerin Twitter ve öğretmenlerin bulunduğu Facebook gruplarında paylaşılmasıyla katılımcılara ulaşılmıştır.

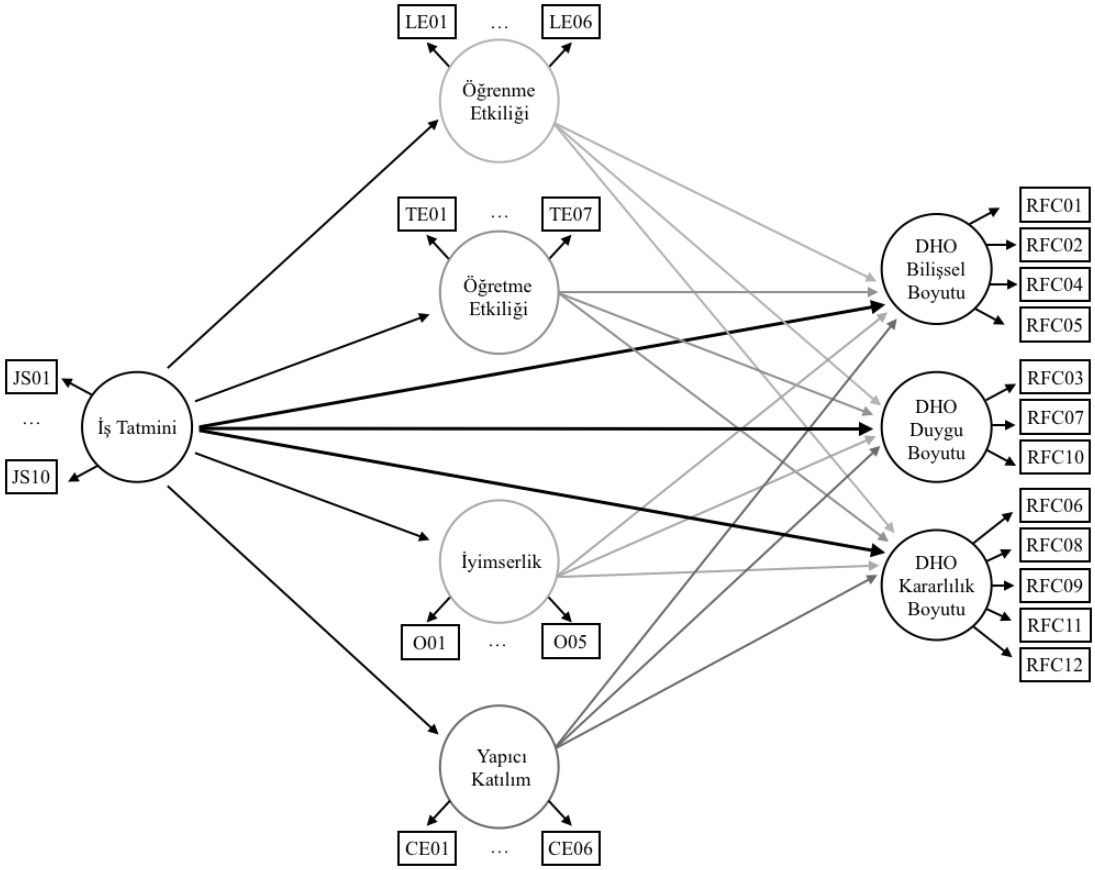
2.5. Verilerin Analizi

Çalışma kapsamında toplanan verilerin betimsel ve yordamsal istatistik analizleri sırasında R istatistiksel analiz programı kullanılmıştır. Çalışmanın kavramsal modeli ise SmartPLS paket programı ile Kısmi En Küçük Kareler Yapısal Eşitlik Modeli (PLS-SEM) kullanılarak test edilmiştir.

İkinci nesil çok değişkenli istatistiksel analiz tekniği olan Yapısal Eşitlik Modellemesine yönelik iki yaklaşım vardır. Yaygın olarak kullanılan Kovaryans Temelli Yapısal Eşitlik Modelinin (CB-SEM) kullanımı normal dağılıma verilere sahip olunduğunda ve halihazırda bulunan teorilere yönelik hipotezlerin test edilmesi amaçlandığında tavsiye edilirken PLS-SEM, veriler normal dağılım göstermiyor ise

ve çalışma doğrulayıcı olmaktan ziyade açıklayıcı (keşfedici) ise tavsiye edilmektedir (Hair vd., 2017; Vinzi vd., 2010). Bu çalışmada kullanılan verilerin normal dağılım göstermemesi ve çalışma modelinde yer alan değişkenler arasındaki ilişkiler hakkında sınırlı ön bilgi olması sebebiyle PLS-SEM tercih edilmiştir. Buna ek olarak, PLS-SEM'in örtük değişkenleri hem yansıtıcı hem de biçimlendirici ölçüm modelleri ile tahmin edebilmesi ve karmaşık araştırma modellerinde alt düzey yapılardan üst düzey yapıların oluşturulmasına izin vererek modeldeki karmaşıklığın giderilmesine olanak sağlaması PLS-SEM'in bu çalışmada tercih edilmesinin diğer sebepleridir.

Bu çalışmada, üst yapıları oluşturacak alt yapıların yansıtıcı (Reflective) ölçüm modeline, üst yapıların ise biçimlendirici (Formative) ölçüm modeline sahip olduğu bir Yansıtıcı-Biçimlendirici Hiyerarşik Bileşen Model (Hierarchical Component Model) (Becker vd., 2012) çalışmanın kavramsal modeli olarak benimsenmiştir. Bu model Sarstedt, Hair vd. (2019) tarafından önerilen *Ayrık İki Aşamalı Yaklaşım*

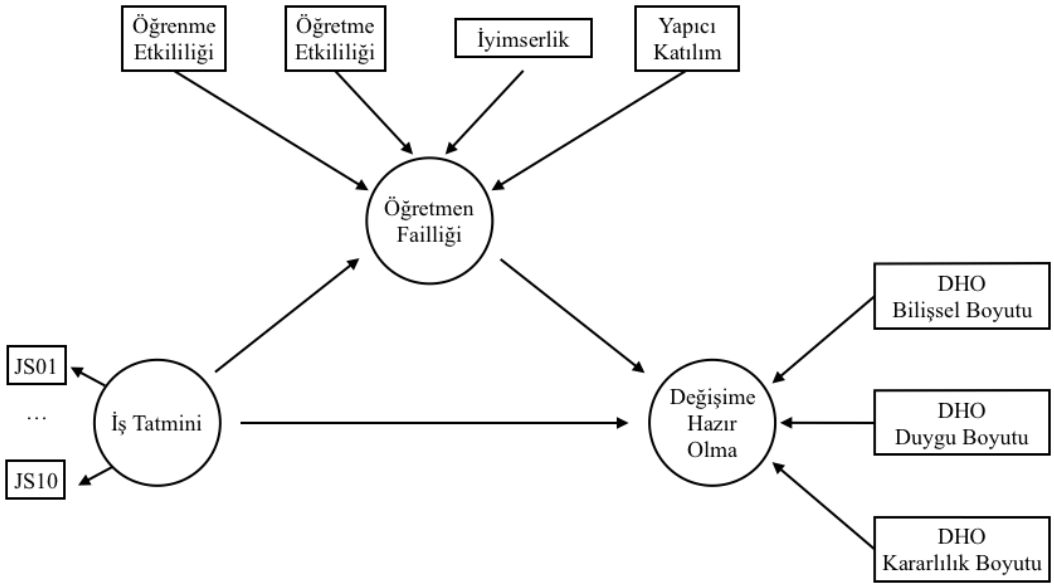


Şekil 1

(Disjoint Two-Stage Approach) ile analiz edilmiştir. Bu yaklaşımın ilk aşamasında Öğretmen Failliği ve Değişime Hazır Olma üst yapılarının alt boyutları ve bunlara ait gözlenen değişkenler Şekil 1'de gösterildiği üzere modele yerleştirilmiştir.

Hair vd.'nin (2018) önerdiği üzere birinci aşamada ölçme modeline (Dış model) yönelik üzere iç tutarlılık güvenirliği (Internal consistency reliability), uyuşum geçerliliği (Convergent validity) ve ayrışma geçerliliği (Discriminant validity) incelenmiştir. Hair vd.'nin (2017) tavsiye ettiği prosedür takip edilerek ilk olarak örtük değişkenler ve bu değişkenlere ait gözlenen değişkenler arasındaki standart yükler incelenmiş olup 0,40 değeri altında kalan maddeler ölçekten çıkarılmış, 0,40 ve 0,708 değerleri arasında kalan maddeler ise ancak bu maddeler modelden çıkarıldıklarında kompozit güvenirlik (Composite reliability) değeri artıyor ise ölçekten çıkarılmıştır. İkinci olarak, ölçeklerin iç tutarlılık düzeyini incelemek üzere 0,70 ile 0,90 değerleri arasında olması beklenen kompozit güvenirlik değerleri ve 0,70'ten büyük olması beklenen değerleri Cronbach's Alpha incelenmiştir. Sonrasında, kavramsal modelde bulunan birinci düzey örtük değişkenlere yönelik uyuşum geçerliliği en az .50 değeri alması beklenen açıklanan ortalama varyans (Average variance extracted-AVE) değeri ile değerlendirilmiştir. Son olarak, Şekil 1'de gösterilen kavramsal modelde yer alan yapıların birbirlerinden farklı yapılar olduğunun kanıtlanması ayrışma geçerliliğinin sağlanması açısından gereklidir. Bu amaçla çapraz yükleme değerleri (Cross-loadings), HTMT oranı (Heterotrait-Monotrait Ratio) ve Fornell-Larcker kriteri incelenmiştir. Çapraz yükleme koşulunun sağlanması için her bir göstergenin ait olduğu değişkendeki dış yükleme değerinin diğer yapılarla sahip olduğu dış yükleme değerinden daha olması beklenirken, HTMT oranının 0,90 değerini geçmemesi gerekmektedir. Fornell-Larcker kriteri ise ayrışma geçerliliğinin sağlanması için yapılara ait AVE değerlerinin kareköklerinin, yapılar arasındaki korelasyonlardan büyük olmasını şart koşmaktadır. Şu vurgulanmalıdır ki ayrık iki aşamalı yaklaşımın birinci aşamasında yalnızca ölçüm modelinin değerlendirilmesi ve onaylanması amaçlandığından elde edilen yol katsayı değerleri bu aşamada değerlendirilmemiştir. Bu aşamada, birinci düzey değişkenlerin elde edilen yapı skorları ikinci aşamada kullanılmak üzere veri setine kaydedilmiştir (Sarstedt vd., 2019).

Ayrık iki aşamalı yaklaşımın ikinci aşamasında veri setine kaydedilen yapı skorları Şekil 2'de gösterildiği üzere ikinci düzey değişkenlerin gösterge değişkenleri olarak modele yerleştirilmiş ve yol analizi gerçekleştirilmiştir (Hair vd., 2018; Sarstedt vd., 2019).



Şekil 2

Hair vd.'nin (2018) önerisi üzerine ilk olarak ikinci düzey değişkenlere yönelik çoklu doğrusal bağlantı (multicollinearity) ve faktör ağırlıklarının alaka düzeyleri ve önemleri incelenmiştir. İkinci düzey yapıları oluşturan birinci düzey değişkenler arasında çoklu doğrusal bağlantı olup olmadığı varyans şişme faktörünün (Variance inflation factor-VIF) eşik değer olarak kabul edilen 3 değerini aşıp aşmadığı ile değerlendirilmiştir (Hair vd., 2019). Daha sonra, türev örneklemin 5.000 seçildiği yeniden örnekleme (Bootstraping) yöntemi kullanılarak faktör ağırlıklarının anlamlılıkları elde edilen güven aralıkları vasıtasıyla incelenmiştir.

Çalışmanın ölçüm modelinin geçerlik ve güvenirlik açısından literatürde yeterli görülen bulgulara sahip olduğu onaylandıktan sonra yapısal (İç) model (Structural, Inner model) değerlendirilmiştir. Modeldeki yol katsayılarının bulunması ve güven aralıklarının belirlenmesi amacıyla türev örneklemin 5.000 olarak seçildiği yanlılığı düzeltilmiş ve hızlandırılmış yeniden örnekleme (Bias-corrected and accelerated

bootstraping) yöntemi kullanılmıştır. Kavramsal modelin tahmin yeteneği, açıklanan varyans değerleri (R^2) ve etki büyüklükleri (f^2) ile kontrol edilmiştir. Sonrasında, elde edilen yol katsayılarının anlamlılığı incelenerek hipotezler test edilmiştir. Modelde incelenen aracılık rolünün sınıflandırılmasında Zhao vd. (2010) tarafından önerilen çerçeve benimsenmiştir. Bu yazarlar, aracılık rollerinin incelendiği kavramsal modellerde karşılaşılabilecek beş durumu, yordayıcı ve bağımlı değişkenler arasında (1) hem doğrudan hem de dolaylı etkinin söz konusu olduğu ve bu etkilerin aynı işarete sahip olduğu *tamamlayıcı aracılık* (Complementary mediation), (2) hem doğrudan etki hem de dolaylı etkinin söz konusu olduğu fakat bu etkilerin zıt işarete sahip olduğu *rekabetçi aracılık* (Competitive mediation), (3) dolaylı etkinin söz konusu olduğu fakat doğrudan etkinin gözlemlenmediği *yalnızca dolaylı aracılık* (Indirect-only mediation), (4) doğrudan etkinin söz konusu olduğu fakat dolaylı etkinin gözlemlenmediği *yalnızca doğrudan etki* (Direct-only non-mediation), (5) ne doğrudan etki ne de dolaylı etkinin gözlemlendiği *etki yok* (No-effect) olarak isimlendirmişlerdir (Şekil 3.4).

3. BULGULAR

Çalışmanın araştırma sorusuna yönelik asıl analize başlamadan önce demografik form ile toplanan grup değişkenlerinin çalışmanın bağımlı değişkenlerinde anlamlı farklılıklar oluşturup oluşturulmadığı uygulanan parametrik olmayan Mann-Whitney U testleri, Kruskal-Wallis H testleri ve Dunn testleri ile incelenmiştir. Bu çalışmada bu testlerin parametrik alternatiflerine (ör., t-test, ANOVA) göre tercih edilmesinin sebebi incelenen değişkenlerin normal dağılım göstermemesidir. Mann-Whitney testleri öğretmenlerin cinsiyetlerinin ve 2023 Eğitim Vizyonu belgesi ile öngörülen değişikliklere yönelik hizmet içi eğitimlere katılımın çalışmanın bağımlı değişkenlerinde anlamlı farklılıklar yaratmadığını göstermiştir. Yaş, idari görev ve öğretmenlerin görev yaptıkları okulun öğrenci sayısı ve okul düzeyi değişkenlerinin bağımlı değişkenler üzerinde anlamlı farklılıkları açıklayıp açıklamadığı yürütülen Kruskal-Wallis testleri ile araştırılmıştır. Okulda bulunan öğrenci sayısı herhangi bir farklılığı açıklamazken, öğretmenlerin görev aldıkları okul düzeyi değişkeninin grup değişkeni olarak kullanıldığı Kruskal-Wallis testlerinde öğrenme etkililiği ($H(2)$ =

8.04, p = .02), öğretme etkililiği (H(2) = 20.20, p < .001), iyimserlik (H(2) = 9.17, p = .01) ve yapıcı katılım (H(2) = 14.79, p < .001) boyutları için anlamlı fark gözlemlemiştir. Bu boyutlar için hangi okul düzeyleri arasında fark olduğunu araştırmak üzere post-hoc Dunn testleri gerçekleştirilmiştir. Bu testlerin sonuçları ilkokul ve ortaokul öğretmenlerinin öğrenme etkililiği (p = .01), öğretme etkililiği (p < .001) ve yapıcı katılım (p < .001) ile ilkokul ve lise öğretmenlerinin öğretme etkililiği (p < .001) ve iyimserlik (p = .02) boyutlarında anlamlı fark gösterdiğini ortaya çıkarmıştır. Ancak, bağımlı değişkenler üzerinde anlamlı fark oluşturan tek değişken olan okul düzeyi, bu çalışmada çok seviyeli bir analiz yapılması amaçlanmadığı için sonraki analizlere dahil edilmemiştir.

Ayrık iki aşamalı yaklaşımın ilk aşamasında ilk olarak dış yükleme değerleri incelenmiştir. TA.LE06 kodlu maddenin 0,40 değerinden az bir değerle ilişkili olduğu yapıya yüklenmesi sebebiyle ölçekten çıkarılmıştır. Toplamda 14 gözlenen değişken 0,40 ve 0,70 arasındaki değerlerle yüklenmesine rağmen bunlardan 5 tanesinin (JS01, JS02, JS10, TA.TE06, TA.TE07) bulundukları ölçekten çıkarılmasının ölçeğin kompozit güvenirlik değerini artırdığı gözlemlenmiş ve bu maddeler ölçekten çıkarılmıştır. Geriye kalan gösterge değişkenlerin yükleri 0,57 ile 0,87 arasında değişmektedir (Tablo 4.6). Çalışmada kullanılan ölçeklerin iç tutarlılık güvenirliğine yönelik kanıtlar 0,84 ve 0,90 arasında değişen kompozit güvenirlik ve 0,72 ile 0,88 arasında değişen Cronbach's Alpha değerleri (Tablo 4.6) ile sağlanmıştır. Sonrasında, ölçeklerin uyuşum geçerlilikleri incelenmiş ve elde edilen 0,50 ile 0,68 arasında değişen açıklanan ortalama varyans (AVE) değerleri (Tablo 4.6), kullanılan ölçeklerin uyuşum geçerliliğine sahip olduğunu göstermiştir. Ayrışma geçerliliğinin değerlendirilmesi için ilk olarak Fornell ve Larcker kriteri göz önünde bulundurulmuş ve her bir yapıya ait açıklanan ortalama varyans değerinin karekökünün bu yapıların diğer yapılarla olan korelasyon değerlerinden büyük bulunması (Tablo 4.7) ayrışma geçerliliği için ilk kanıtı oluşturmuştur. Ayrışma geçerliliğine yönelik diğer kanıt, her bir gösterge değişkeninin ilgili olduğu örtük değişkenle sahip olduğu gösterge yükünün diğer örtük değişkenlerle sahip olduğu gösterge yüklerinden büyük olmasıyla sağlanan çapraz yükleme koşuluyla elde edilmiştir (Tablo 4.8). Son olarak, ayrışma

geçerliliği HTMT oranı ile de incelenmiş olup 0,90 eşik değerini aşmayan oranlar ayrışma geçerliliğinin çalışmada sağlandığını göstermiştir (Tablo 4.9).

Ayrık iki aşamalı yaklaşımın ilk aşamasında elde edilen bulgular Şekil 1'deki ölçüm modelinin geçerliliği ve güvenirliği için gerekli kriterleri sağladığından Şekil 2'de belirtilen kavramsal modelin analizlerinden elde edilen bulguların değerlendirilmesiyle devam edilmiştir. İlk olarak, ikinci dereceden yapıların farklı boyutlarını oluşturan alt düzey yapılar arasında çoklu doğrusal bağlantı olmadığı 3'ün altında bulunan varyans şişme faktörleri ile anlaşılmıştır (Tablo 4.10).

Hem yansıtıcı alt düzey hem de biçimlendirici üst düzey yapılara ait ölçüm modelleri kabul edilebilir seviyelerde güvenilir ve geçerli bulunduğundan yapısal modelin analizinden elde edilen bulguların değerlendirilmesiyle devam edilmiştir. Öncelikle, açıklanan varyans değerleri (R^2) incelenmiştir. İş doyumu, öğretmen failliği değişkenindeki varyansın %36,6'sını açıklarken iş doyumu ile öğretmen failliği değişime hazır olma durumundaki varyansın %20'sini açıklamıştır. R^2 değerinin 0,19, 0,33 ve 0,67'den fazla olması sırasıyla zayıf, orta ve güçlü açıklanan varyansa işaret ettiğinden (Chin, 1998) bu çalışma modeli öğretmen failliğine ait orta, değişime hazır olmaya ait zayıf derecede varyans açıklamıştır. Modeldeki yapıların etki büyüklükleri (f^2) incelendiğinde (Cohen, 1988), iş doyumunun öğretmenlerin faillik düzeyleri üzerinde yüksek etkiye sahip olduğu (f^2= 0,577), değişime hazır olma üzerinde ise etkiye sahip olmadığı (f^2 = 0,015) sonucuna varılabilir. Buna ek olarak, öğretmen failliğinin değişime hazır olma üzerinde orta düzey etkiye (f^2 = 0,212) sahip olduğu gözlemlenmiştir.

Açıklanan varyans değerleri ve etki büyüklükleri incelendikten sonra yapısal modele yönelik hipotezler kontrol edilmiştir. İş doyumunun öğretmenlerin değişime hazır olma durumları üzerinde negatif yönde yordayıcı etkisinin bulunduğu (b = -0,139, p < 0,01) saptanmıştır. Bununla birlikte, iş doyumu öğretmen failliğini olumlu yönde yordayan (b = 0,605, p <0,01) bir değişken olarak bulunmuştur. Ayrıca, öğretmen failliğinin değişime hazır olma ile pozitif yönde ilişkili (b = 0,517, p <0,01) olduğu görülmüştür.

Son olarak, iş doyumu ile değişime hazır olma arasındaki ilişkide öğretmen failliğinin aracılık rolü incelenmiştir. İş doyumu ile değişime hazır olma değişkenleri arasındaki dolaylı etki pozitif ve istatistiksel olarak anlamlı bulunmuştur (b = 0,313, p <0,01). Bununla birlikte, bu iki değişken arasındaki doğrudan ilişkinin negatif ve istatistiksel olarak anlamlı olduğu (b = -0,139, p <0,01) gözlemlenmiştir. Dolaylı ve doğrudan etkinin istatistiksel olarak anlamlı ancak zıt işaretli olduğu yönündeki bu bulgu, iş doyumu ile değişime hazır olma arasındaki ilişkide öğretmen failliğinin modeldeki aracılık rolünün rekabetçi aracılık olarak sınıflandırılabileceğine işaret etmektedir (Zhao vd., 2010). Dolayısıyla, öğretmen failliğinin modeldeki aracılık rolü bu bulgular ile doğrulanırken, rekabetçi aracılık bulgusu modele dahil edilmemiş olan başka aracı değişkenlerin varlığını göstermektedir.

4. TARTIŞMA

Çalışmanın amacı, 2023 Eğitim Vizyonu belgesiyle sunulan değişikliklerin gerçekleştirildiği ortamda, devlet okulu öğretmenlerinin iş doyumları ile değişime hazır olma durumları arasındaki ilişkide öğretmen failliğinin aracılık rolünün incelenmesidir.

Örgütsel değişim yazınındaki önceki çalışmalar iş doyumu ile değişime yönelik tutumlar arasında hem olumlu hem de olumsuz ilişkiler ortaya koymuştur (Oreg vd., 2011). İş doyumu ile değişime yönelik tutumlar arasında olumlu yönlü ilişki literatürde daha yaygın olmasına rağmen (Chih vd., 2012; McNabb & Sepic, 1995; Vakola, 2014, Yousef, 2000; Yousef, 2017) bu çalışmada iş doyumu ile değişime hazır olma değişkenleri arasında negatif yönlü ilişki bulunmuştur. İş doyumunun değişime hazır olma durumu üzerindeki olumsuz etkisine yönelik olası açıklama öğretmenlerin değişim geçmişleri ile ilgili olabilir. Saylık vd. (2021) öğretmenlerin Türk eğitim sisteminde gerçekleşen değişimleri sık gerçekleşen, köreltici, tektipleştirici ve uzun vadeli sonuç üretmeyen girişimler olarak algıladıklarını ortaya koymuştur. Önceki değişim girişimlerinin öğretmenler üzerinde etki bıraktığı ve öğretmenlerin gelecek değişimleri nasıl değerlendireceklerini etkileyebileceği düşünüldüğünde olumsuz değişim geçmişinin değişime yönelik olumsuz tutumlar geliştirilmesine sebep olabilir (Çalışkan, 2020). Ayrıca bazı çalışmalar, iş doyumu düşük olan çalışanların, değişimi

örgütlerini arzu ettikleri duruma getirebilecekleri bir fırsat olarak algılayabileceklerini, iş doyumu yüksek olan çalışanların ise değişimi getirdiği belirsizlik ve örgütsel süreç ile yapılardaki farklılaşmalar yüzünden hoş karşılamayabileceklerini göstermiştir (Hardin, 1967; Vakola, 2014; van Dam, 2005). Bu çalışmada öğretmenlerin iş doyumu düzeyi ortalamasının 4 üzerinden 3,04 ile yüksek bulunması ve Türk eğitim sisteminin başarısız değişim girişimleri geçirmesi düşünüldüğünde çalışmada bulunan olumsuz ilişki geçerli görünmektedir. Her ne kadar bu değişkenler arasında istatistiksel olarak anlamlı doğrudan ilişki bulunsa da iş doyumunun değişime hazır olma üzerindeki etki değeri (f^2 = 0,015) ihmal edilebilir düzeydedir. Dolayısıyla bu anlamlı ilişkiyi daha iyi açıklayabilecek aracı değişkenlerin var olduğu öne sürülebilir.

İş doyumu ile öğretmen failliği arasındaki ilişkiye yönelik sınırlı alan yazın bilhassa iş doyumu için öğretmen failliğinin önemine vurgu yapmaktadır. Öğretmen failliği yazınında, faillik algısına sahip olan öğretmenlerin yaptıkları işi sıradan bir işten daha kıymetli gördüklerinden dolayı yüksek iş doyumuna sahip oldukları iddia edilmiştir (Priestley vd., 2015, Tao & Gao, 2017). Bununlar birlikte, Heijden vd. (2015) tarafından ulaşılan ve işinden keyif alan öğretmenlerin değişim girişimlerinde daha fazla faillik davranışları sergiledikleri yönündeki bulgudan yola çıkılarak, bu çalışmada iş doyumu, öğretmen failliğinin bir yordayıcısı olarak belirlenmiştir. Araştırmanın bulguları Heijden ve arkadaşlarının bulgularını destekleyecek şekilde iş doyumu ile öğretmen failliği arasında olumlu bir ilişki ortaya koymuştur. Buna ek olarak, iş doyumunun öğretmen failliği üzerindeki etki değeri oldukça yüksek bulunmuştur (f^2 = 0,577). Bu bulgular ile iş doyumu yüksek olan öğretmenlerin değişim girişimlerinde faillik davranışları sergilemelerinin daha olası olduğu sonucuna varılabilir.

Öğretmen failliğinin değişim hareketleri sırasında öğretmenlerin davranışlarını şekillendirdiği bilinmesine rağmen (Hökkä & Vähäsantanen, 2014; Jenkins, 2020; Ketelaar vd., 2012; Robinson, 2012) öğretmen failliği ile değişime hazır olma değişkenleri arasındaki ilişki araştırmacının bilgisi dahilinde alan yazında incelenmemiştir. Dolayısıyla, bu değişkenler arasındaki olumlu ilişkiyi ortaya koyan bu çalışma eğitimde değişim alanyazınına katkıda sağlayacaktır. Araştırma bulguları,

öğretmen failliğinin değişime hazır olma üzerinde orta düzeyde etkiye sahip olduğunu göstermiştir (f^2 = 0,212). Alanyazında bu yapılar arasındaki ilişkiye yönelik daha önce yapılmış çalışmaların bulunmaması nedeniyle, araştırmanın bu bulgusu için doğrudan bir alanyazın desteği olmamasına rağmen öğretmen failliğinin alt boyutları olarak kavramsallaştırılan öz-yeterliğin (ör., Cunningham vd., 2002; Kwakh & Lee, 2008; Rafferty & Simons, 2006) ve iyimserliğin (ör., Kartika vd., 2021; Kirrane et al., 2017) değişime hazır olmayı olumlu yönde etkileyen değişkenler olduklarına yönelik alanyazındaki bulguların, öğretmen failliği ile değişime hazır olma arasında bulunan pozitif ilişkiyi desteklediği düşünülebilir. Dolayısıyla, Türkiye'deki devlet okulu öğretmenlerinin öğrenme ve öğretme etkililikleri açısından öz yeterlikleri ne kadar yüksekse ve ne kadar iyimserlerse, MEB tarafından yukarıdan aşağıya bir yaklaşımla bir politika belgesi ile önerilen değişikliklere hazır olma durumlarının o kadar yüksek olacağı öne sürülebilir. Bu sav, Kondakci vd. (2017) tarafından belirtildiği üzere, değişim girişimlerinin öğretmenlerin sahip oldukları becerileri sınayabileceği ve geleceğe yönelik endişe uyandırabileceği göz önünde bulundurulduğunda akla yatkın görülmektedir.

Değişime hazır olma ve öncülleri arasındaki ilişkilerin doğrudan ilişkilerden ziyade dolaylı ilişkiler vasıtasıyla daha iyi açıklanabileceği yönündeki öneriler dikkate alınarak (Kondakci et al., 2017; Van Dam et al., 2008; Zayim & Kondakci, 2019), bu çalışmada öğretmen failliğinin aracılık rolü incelenmiştir. Araştırma bulguları, iş doyumunun, öğretmenlerin faillik düzeyleri aracılığıyla değişime hazır olmalarına katkıda bulunduğunu göstermiştir. Daha önceden belirtildiği üzere, iş doyumunun değişime hazır olma üzerindeki doğrudan etkisi ihmal edilebilir seviyede olmasına karşın modele öğretmen failliği eklendiğinde bu iki değişkenin değişime hazır olma durumundaki varyansın %20'sini açıkladığı bulunmuştur. Dolayısıyla, öğretmen failliğinin, iş doyumu ile değişime hazır olma arasındaki ilişkiyi açıklamak için uygun bir aracı değişken olduğu ileri sürülebilir. Ancak, elde edilen rekabetçi aracılık bulgusu, araştırmanın kavramsal modeline dahil edilmemiş ve bu ilişkide aracılık rolü olan başka değişkenlerin de bulunduğuna işaret etmektedir. Baron ve Kenny'nin (1986) belirttiği üzere, sosyal bilimlerde değişkenler arasında birçok nedenselliğin ve ilişkilerin yapıları açıklayabileceği göz önünde bulundurulduğunda, bu çalışmada

yalnızca dolaylı aracılık olarak kavramsallaştırılan (Zhao vd., 2010) ve alan yazında yaygın olarak *tam aracılık* olarak isimlendirilen aracılık türünün elde edilmemesinin beklenen bir durum olduğu not edilmelidir.

4.1. Öneriler

Çalışmanın bulguları, iş doyumunun öğretmen failliğini olumlu yönde etkileyen bir değişken olduğunu göstermiştir. Bu bulgudan hareketle geliştirilebilecek bir öneri değişim girişimlerinde faillik davranışları sergilemeleri beklenen öğretmenlerin iş doyum düzeylerini artırarak faillik düzeylerinin geliştirilmesidir. Bu çalışmada, her ne kadar öğretmenlerin iş doyumu ortalaması 4 üzerinden 3,04 olarak yüksek bulunmuş olsa da öğretmenlerin iş doyumunu daha da yükseltecek stratejilerin geliştirilmesi gerektiği söylenebilir. Öğretmenlerin iş doyumuna yönelik alan yazın incelendiğinde ücretlerin artırılması (Demir & Arı, 2013; Karataş & Güleş, 2010; Kök, 2006), çalışma şartlarının geliştirilmesi (Özdayı, 1998) ve örgütsel adaletin geliştirilmesi (Altaş & Çekmecelioğlu, 2015; Tanrıverdi & Paşaoğlu, 2014) gibi bazı öneriler sunulabilir. Dolayısıyla, değişim sırasında faillik davranışları sergilenmesi istenen öğretmenlerin değişim öncesinde ve sırasında faillik düzeylerini artırmak için yukarıda bahsedilen ve alanyazında mevcut diğer stratejilerin öğretmenlerin iş doyum düzeylerini artırmak için benimsenebilir.

İş doyumu ile öğretmen failliği arasındaki pozitif ilişkiyi yeniden teyit eden araştırma bulgusu (Everitt, 2020; Heijden vd., 2015; Priestley vd., 2015a; Tao & Gao, 2017), karar alıcıları öğretmenlerin iş doyumunu etkileyebilecek öğretmen failliği alt boyutlarına odaklanma konusunda rehberlik edebilir. Örneğin, daha önceden de ortaya konduğu üzere öz-yeterlik ile iş doyumu arasında olumlu ilişki mevcuttur (Klassen & Chiu, 2010). Dolayısıyla, öğretmenlerin öz-yeterliklerini artıracak profesyonel gelişim programları öğretmenlerin iş doyumlarına katkıda bulunabilir. Buna ek olarak, öğretmenlerin faillik sergileyebilecekleri okul bağlamının oluşturulması öğretmenlerin mesleklerini daha anlamlı bulmalarını sağlayarak iş doyum düzeylerini artırabilir (Priestley vd., 2015a).

Çalışmanın sonuçları okul yöneticilerini ve karar alıcıları, öğretmenlerin değişime hazır olma durumlarını geliştirmek için öğretmen failliğinin alt boyutlarına önem

vermeye davet etmektedir. Değişim, birçok zorluğu ve belirsizliği beraberinde getirdiğinden bireyler kendilerinin ve örgütlerinin becerilerine güvenmiyorlarsa değişim için isteksiz olabilirler. Dolayısıyla, öğretmenlerin öğrenme ve öğretme etkililiklerini geliştirmek üzere planlanmış hizmet içi eğitimlerin verilmesi önerilebilir. Ayrıca, öğretmen failliği ile en ilişkili boyut olarak bulunan ve geleceğe yönelik olumlu bakış açısına sahip olma ve iş arkadaşlarıyla iyi ilişkiler içerisinde olma ile ilişkili olan iyimserliğin geliştirilmesi için, okul liderleri ve karar alıcılar Armenakis vd. (1999) tarafından önerilen değişim mesajı stratejisinden yararlanmayı düşünebilirler. Bu stratejiye göre, değişimin gerekliliği, şimdiki ve istenilen durum arasındaki farklılıklar ve değişimin öğretmenler için sağlayacağı değerler vurgulanarak aktarılmalıdır. Ayrıca, değişim mesajı üst yönetimin değişime yönelik desteğini içermelidir. Bu mesaj stratejisinin benimsenmesi öğretmenlerin daha iyimser olmalarını ve değişime hazır olmalarını sağlayabilir.

4.2. Gelecek Çalışmalara Yönelik Öneriler

Çalışmanın sınırlılıklarına dayanan bazı öneriler gelecekte yapılacak çalışmalar için aşağıda sunulmuştur.

İlk olarak, çalışmada benimsenen kolayda örneklem yöntemi, örneklemin temsil edebilirliği ve dolayısıyla sonuçların genellenebilirliği konularında sınırlılıklar oluşturmaktadır. Dolayısıyla, gelecek çalışmalarda rastlantısal örneklem yöntemi kullanılarak katılımcıların belirlenmesi önerilir. Buna ek olarak, sadece devlet okullarında görev yapan öğretmenlerin dahil edildiği bu çalışmanın aksine gelecek çalışmalarda özel okul öğretmenlerinin de örnekleme dahil edilmesi, devlet ve özel okullarda çalışan öğretmenlerin karşılaştırılmasına imkân vererek ek bulgular sağlayabilir.

Bu çalışmada çalışma değişkenlerinde anlamlı farklar yaratan tek grup değişkeninin öğretmenlerin görev aldıkları okul düzeyi olarak bulunmasına rağmen çalışma bu farklılıkları açıklayabilecek şekilde tasarlanamadığından okul düzeyi ileri analizlere dahil edilmemiştir. Gelecek çalışmalarda hem bu farklılıkları açıklayabilecek değişkenlerin kavramsal modele ilave edilmesi hem de iç içe geçmiş (Hiyerarşik) yapıda veriler toplanması düşünülebilir. Eğer bu öneri dikkate alınacak olunursa, farklı

seviyelerden toplanmış verileri kullanarak örtük değişkenler arasındaki karmaşık ilişkilerin incelenmesine olanak veren çok düzeyli yapısal eşitlik modellemesi kullanımı uygun olacaktır.

Çalışmada elde edilen rekabetçi aracılık bulgusu, daha önceden belirtildiği üzere araştırmanın kavramsal modeline dahil edilmemiş aracı değişkenlerin varlığına işaret etmektedir. Öğretmen failliği, öğretmenlerin kapasiteleri ve bulundukları bağlamın etkileşiminden kaynaklanan bir yapı olmasına rağmen bu çalışmada daha çok öğretmenlerin kapasitesi olarak kavramsallaştırılmıştır. Dolayısıyla, bu çalışmada dahil edilmemiş ancak iş doyumu ile değişime hazır olma arasındaki ilişkide aracılık rolü olabilecek güven (Jenkins, 2020; Willis vd., 2019), okul kültürü (Soini, Pietarinen, & Pyhältö, 2016; Toom vd., 2015; Willis vd., 2019), meslektaş ilişkileri (Robinson, 2012) ve liderlik (Pantić, 2015) gibi bağlamsal değişkenlerin gelecek çalışmalarda aracı değişken olarak değerlendirilmesi önerilir.

Çalışmanın kesitsel yapısı sebebiyle değişkenler arasında nedensellik ilişkilerinin incelenmesi mümkün değildir. Dolayısıyla, gelecek çalışmalarda değişim girişiminin farklı aşamalarında toplanacak boylamsal veri ile çalışma değişkenleri arasındaki nedensellikler ortaya konabilir.

Ayrıca, araştırmacılar gelecek araştırmalarda karma yöntem araştırma tasarımını benimseyip nicel ve nitel yöntemleri bir arada kullanmayı düşünebilirler. Böylece araştırmacılar, öz bildirime dayalı olarak toplanan veriler dolayısıyla oluşabilecek ortak yöntem yanlılığının üstesinden gelebilir ve farklı veri kaynakları ile çalışmaya derinlik katabilir.

Son olarak, bu çalışmada ayrık iki aşamalı hiyerarşik lineer model kullanılarak sadece üst düzey yapılar arasındaki ilişkilere odaklanılmış (Şekil 2) ve kavramsal modeldeki karmaşıklık giderilmiş olsa da gelecek araştırmalarda, ayrık iki aşamalı yaklaşımın birinci aşamasında elde edilen bulguların raporlanarak Şekil 1'de belirtilen ilişkilerin ortaya konulması mümkündür.

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