

FACTORS BEHIND TEACHER AGENCY: A STRUCTURAL EQUATION
MODELLING STUDY

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ABSTRACT

FACTORS BEHIND TEACHER AGENCY: A STRUCTURAL EQUATION MODELLING STUDY

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The purpose of this study was to model the relationship among factors that relate to teacher agency. The particular variables under scrutiny were teachers' personality traits, levels of academic optimism, and their commitment to teaching. More specifically, the present study aimed at addressing the following research question through Structural Equation Modeling (SEM): "To what extent is teacher agency predicted by the model including direct and indirect effects of personality traits, academic optimism, and commitment to teaching?" The study sample comprised of 577 in-service secondary and high school teachers working in public schools in selected districts of Ankara. Data were collected through a survey instrument which includes 4 scales showing good psychometric characteristics (reliability estimates range from .70 to .89).

The results revealed that teachers' academic optimism and their commitment to the teaching profession were significant predictors of teachers' agency, while the direct effect of personality traits on teacher agency was not significant. On the other hand,

when indirect effects were examined, findings indicated that personality traits had a significant indirect effect on teacher agency through academic optimism and commitment to the teaching profession. Moreover, academic optimism had an indirect effect on teacher agency through commitment to the teaching profession. While academic optimism was predicted with an explained variance of 30 percent, commitment to the teaching profession was accounted for a 42 percent of the variance. The overall model explained 55 percent of the variance in teacher agency.

Keywords: Teacher agency, academic optimism, commitment to teaching, personality traits

ÖZ

ETKEN ÖĞRETMENLİĞİN ARKASINDA YATAN FAKTÖRLER: BİR YAPISAL EŞİTLİK MODELLEMESİ ÇALIŞMASI

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Bu çalışmanın amacı etken öğretmenliği yordayan faktörleri ve aralarındaki ilişkiyi modellemektir. Bu amaçla incelenen değişkenler öğretmenlerin kişilik özellikleri, akademik iyimserlik seviyeleri ve öğretmenlik mesleğine adanmışlık düzeyleridir. Çalışma “Etken öğretmenlik, kişilik özellikleri, akademik iyimserlik ve öğretmenlik mesleğine adanmışlık tarafından modelde ne düzeyde yordanmaktadır?” araştırma sorusuna cevap vermeyi hedeflemiştir. Bu ilişkileri araştırmak için Yapısal Eşitlik Modeli kullanılmıştır. Çalışmanın örneklemini Ankara’da devlet okullarında çalışmakta olan ortaokul ve lise öğretmenleri oluşturmuştur. Veriler psikometrik özellikleri oldukça uygun olan 4 ölçek aracılığı ile toplanmıştır (Güvenirlik değerleri .70 ile .89 arasında değişmektedir).

Sonuçlar öğretmenlerin akademik iyimserlik seviyeleri ile mesleğe adanmışlık düzeylerinin etken öğretmenliğin anlamlı yordayıcıları olduğunu göstermiş, öğretmenlerin kişilik özelliklerinin ise doğrudan etkisi bulunamamıştır. Ancak kişilik özelliklerinin anlamlı akademik iyimserlik ve mesleğe adanmışlık üzerinden dolaylı

etkisi gözlenmiştir. Ek olarak akademik iyimserliğin mesleğe adanmışlık üzerinden dolaylı etkisinin var olduğu görülmüştür. Akademik iyimserlik değişkeni 30% oranında açıklanırken öğretmenlik mesleğine adanmışlık 42% varyans ile açıklanmıştır. Toplam model etken öğretmenliği 55% oranında açıklamaktadır.

Anahtar kelimeler: Etken öğretmenlik, akademik iyimserlik, öğretmenlik mesleğine adanmışlık, kişilik özellikleri

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CHAPTER 1

INTRODUCTION

This chapter presents a brief background to the study highlighting the rationale behind this research and its significance, as well as providing definitions of the terms used throughout the manuscript.

1.1 Background of the Study

“The greater danger for most of us is not that our aim is too high and we miss it,
but that it is too low and we hit it.”

Aristotle

Today, more and more is being expected from a teacher compared to the qualifications asked of the teachers of yesterday. As Darling-Hammond, Wise, and Klein (1997) put, offering high quality education for all students necessitates more knowledge and a significantly wide range of skills for teachers; and teaching for today’s learning demands requires a profound ability. It is beyond doubt that well-functioning educational systems need a steady supply of change-maker, agentic teachers who can respond to the diverse needs of students and the community and make a difference in their lives. Moreover, the idea that a teacher should act as an agent of change has been one principal and common understanding considering the pivotal role of teachers in students’ lives and incremental value in today’s more and more challenging communities. It is also clearly important that a robust sense of professional agency fosters teachers’ job satisfaction, welfare, health, and commitment (Cribb & Gewirtz, 2007; Hökkä & Vähäsantanen, 2014). Despite the acknowledged effect of teachers on student achievement and societal advancement,

however, the truth tells another story. It shows us that there exists a lack of agency in teachers, especially in terms of taking responsibility for innovations (Pyhältö, Pietarinen & Soini, 2012). However, to be able to take part in constant professional development, engage in innovations, and foster student learning, the teachers need to sustain and advance their sense of agency in both the classroom and in the community (Toom, Pietarinen, Soini, & Pyhältö, 2017).

To better understand the construct, the definition and the underlying meaning of agency needs to be explored. Agency is defined as:

the temporally constructed engagement by actors of different structural environments -the temporal relational contexts of action- which, through the interplay of habit, imagination, and judgment, both reproduces and transforms those structures in interactive response to the problems posed by changing historical situations. (Emirbayer & Mische, 1998, p. 970).

Emirbayer and Mische (1998) argue that agency is an interplay of past, present, and future, drawing attention to the dynamic structure of the iterational, projective, and practical-evaluative dimensions of the agency. It is referred to as the “temporally embedded process of social engagement, informed by the past, oriented toward the future and ‘acted out’ in the present” (Emirbayer & Mische, 1998, p. 963). Figure 1.1 represents the model constructed by Priestley, Biesta, and Robinson (2013) based on Emirbayer and Mische’s perspective on the agency.

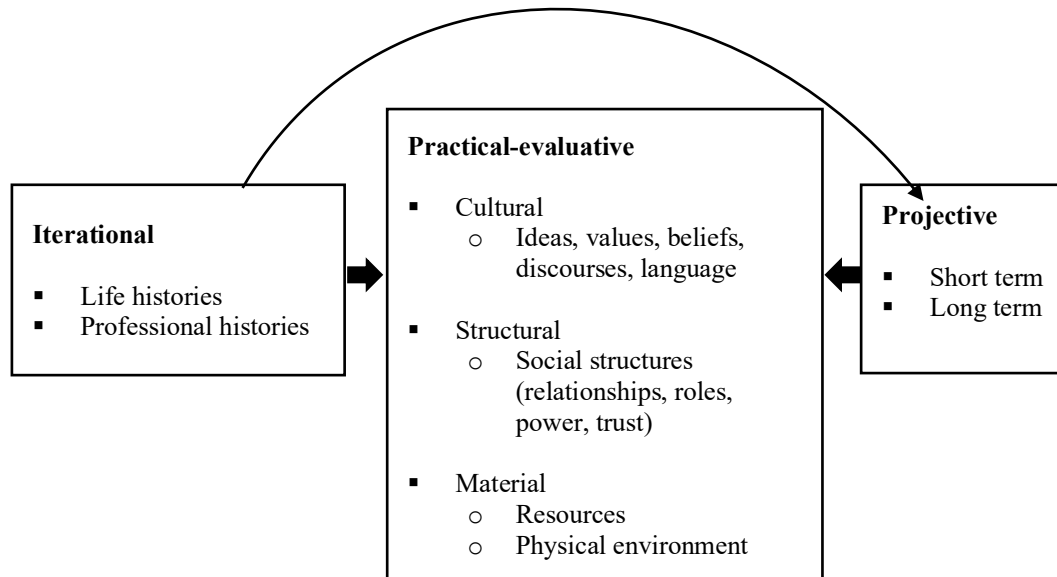


Figure 1.1. Understanding teacher agency (Priestley et al., 2013).

In this triadic model proposed by Priestley et al. (2013), the authors indicated that the iterational and projective dimensions of agency relate to what people bring to their interactions. The iterational dimension concerns life histories and past patterns of thought and action, while the projective dimension involves imaginative generation of future, short- and long-term, trajectories of action. Finally, the practical-evaluative dimension is embedded in the present and differentiates between the cultural, structural and material domains. While cultural aspects relate to ideas, beliefs, and discourses; the structural aspects refer to relationships, roles, and trust; and the material aspects relate to resources and the broader physical setting in which teachers perform. Priestley et al. (2013) suggest that it is important to focus on these different dimensions to formulate rich understandings of teacher agency in different contexts; one can focus on different elements.

Therefore, in this study, all the iterational, practical-evaluative, and projective domains have been taken into consideration in the structural model proposed. In terms of iterational aspects, teachers' personality traits are added to the model as part of

their personal life histories. Teachers' academic optimism, which involves trust in students and parents, self-efficacy beliefs, and academic emphasis composed of both the cultural and structural dimensions of the practical evaluative domain. Commitment to the teaching profession is also included in this domain with the connoted value teachers attribute to teaching. Finally, teacher agency reflects the projective dimension where they plan to initiate agentic actions.

Furthermore, teacher agency also is referred to as teachers' capacity and enthusiasm for decision making and the purposeful actions taken resulting from these decisions that create a difference in her/his life and the community (Pyhältö et al., 2012). Therefore, it is one concept that needs profound attention since it is a fundamental element of teacher professionalism (Priestley et al., 2013). In this respect, teacher agency is central to the course of teacher learning and school improvement (Charteris & Smardon, 2015) and it is a dynamic course whereby change and stability appear in educational settings (Priestley, Edwards, Priestley, & Miller, 2012). Teachers' ability to function as professional agents is, on the other hand, affected by various conditions including the context and resources at hand. It is regulated by the demands, resources, possibilities, and constraints a situation brings:

Schools as learning communities represent complex contexts with multiple levels and practices, some of them being contradictory. There are opportunities for agency, avoidance, opposition, and resistance, and as a consequence, there is inevitable tension in interactions between different actors in these contexts. Hence, teachers' professional agency is a relational phenomenon that is highly embedded in professional interactions between the teachers, pupils and their parents, and with other members of the school community. (Pyhältö et al., 2012, p. 100).

As Pyhältö, Pietarinen, and Salmela-Aro (2011) argued, since the cited stakeholders most frequently have different performance and progress expectations, the interaction among them is likely to lead to frictions. In this respect, with the addition of academic optimism incorporating trust in students and parents, and of commitment to the teaching profession, which endorses a dimension of commitment to students, the

model tested in this study makes the picture of teacher agency more complete. Since teacher agency is investigated in a correlational manner, the model this dissertation reflects the essential domains of teacher agency.

Again, teacher agency is the power of teachers to vigorously and decisively lead their own work lives within structurally defined limits (Hilferty, 2008). It is what teachers “do or achieve” (Biesta & Tedder, 2006, p. 22) within the constraints and opportunities of social structures. Their agency, however, is constrained not only by the nature of the activity system but also by the teacher’s own experiences. It is maintained that an individual teacher’s professional agency is in constant whirling depending on a variety of factors such as the teacher’s professional background, orientation, and work context (Stronach, Corbin, McNamara, Stark, & Warne, 2002). It is suggested that, bringing new conceptions to school by and large depends on teachers’ knowledge, abilities, their professional efficacy beliefs and motivation to embrace and cultivate ideas at several different levels in their daily work, professional community, and their perceptions on the objects of development work (Pyhältö et al., 2012). Although it has not been explicitly and conceptually established, the teachers’ senses of selves have also been implicit in a large spectrum of literature (Pyhältö et al., 2012). There is solid empirical evidence that teachers’ work-related interests, capabilities, and experiences steer their exercise of professional agency (Vähäsantanen, Saarinen, & Eteläpelto, 2009). Considering the variables in the present study, all the personality traits, academic optimism, and commitment to teaching reflect these personal variables embedded albeit narrowly examined in the literature.

As can be observed, both the situational and personal factors hand in hand co-define teacher agency in a significant manner (Emirbayer and Mische, 1998). On the other hand, there has been little explicit research on teacher agency or development of theory on teacher agency (Priestley et al., 2013). Therefore, the current study is quite promising to shed light upon the composites of the teacher agency phenomenon by

exploring the relationship among teachers' individual domains (personality traits, academic optimism, and commitment to teaching) relating to teacher agency.

1.2 Purpose of the Study

The purpose of this study was to test a structural model assessing the relationship among factors that were hypothesized to relate to teachers' sense of agency. In this respect, in addition to teacher agency, teachers' personality traits, academic optimism, and commitment to teaching were the variables under scrutiny and were examined in terms of their explanatory power in one another. Figure 1.2 represents the hypothesized model that was tested within the scope of this dissertation.

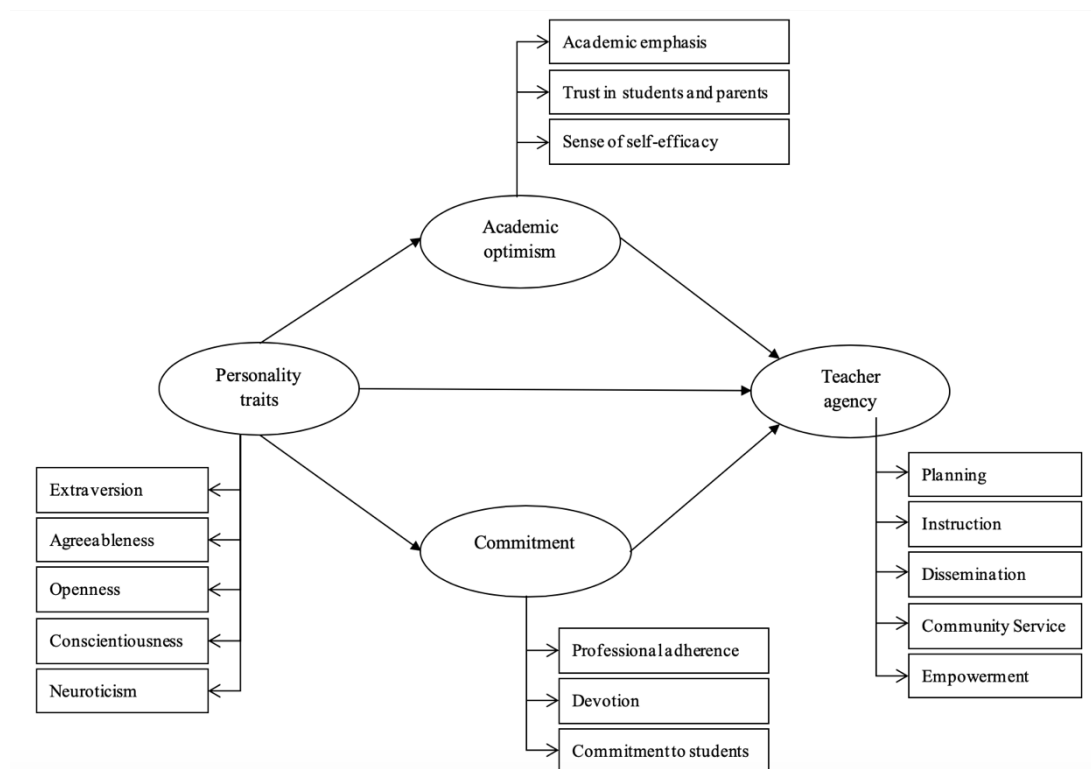


Figure 1.2. The model portraying the relationships between teacher agency, and personality traits, academic optimism, and commitment to teaching.

Thus, the research question that was tested was:

- To what extent is teacher agency predicted by the model including direct and indirect effects of personality traits, academic optimism, and commitment to teaching?

1.3 Significance of the Study

The tasks of today's teachers are immensely diverse. Teachers are expected to build a relevant, inspirational and positive environment for the students, themselves, and their colleagues in varying professional settings (Toom, Pyhältö, & O'Connell Rust, 2015). To achieve this end, they are required to be involved in innovative learning, adjust themselves according to various requirements in their work environment, interpret and negotiate with both parents and colleagues, and the diverse possibilities conveyed by policies, make autonomous choices, and create a balance between their personal and reciprocal understandings (Toom et al., 2015). All of these courses of action necessitate teachers' agency. Thus, in order to better understand the depth and breadth of teacher agency, the present study explored the construct in a thorough manner. In this study, the dimensions of teacher agency concept included all the innovative learning, adjusting to the requirements, negotiating with the parents, and autonomous decision-making aspects and with this feature. This dissertation, therefore, is promising to identify the teacher agency construct in depth and produce implementable results to improve teachers' agentic practices.

Furthermore, teacher agency is proposed to be a fundamental competence not only for fostering student learning but also for continuing professional growth, cooperative teacher learning, and school improvement; and it is considered a problem if teachers lack agency in terms of, for instance, pedagogical responsibilities, student learning, collegiality, innovations, societal responsibilities, and continuous professional development (Toom et al., 2015).

Teachers' professional agency is conceptualized as to be:

1. practiced when the external entities such as other colleagues or the community affect their work or identities,
2. closely related to their job-related identities, inclusive of commitments, interests, motivations, and aims,
3. comprised of their characteristics and own resources stemming from their knowledge, work experiences, and skills,
4. purposefully exercised under certain material and sociocultural conditions, and is limited and supported by these conditions,
5. perceiving social and individual objects as distinct but reciprocally inclusive of each other,
6. needed for advancing their work and community, and for engaging in creative plans and for professional learning and identities in varying work practices (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013).

Both personal and structural factors contour, foster, assist or constrain teachers' agency in different professional settings of classroom, school or community (Toom et al., 2015). These factors can range from internalized norms, values, and practices of the community to educational policies affecting teachers' agency (Dovemark, 2010). In this respect, the beliefs and values teachers hold about teaching and learning are suggested to significantly affect the achievement of professional agency (Biesta, Priestley, & Robinson, 2015; Pantić, 2015; Stillman & Anderson, 2015). Teachers' sense of self is one personal quality that emerges as an interdependent factor of teacher agency (Buchanan, 2015; Pantić, 2015; Stillman & Anderson, 2015). Moreover, in addition to the intentional actions and behaviors of teachers, teacher agency also embodies the internal processes such as their behaviors, emotions and cognitive processing (Soini, Pietarinen, & Pyhältö, 2016).

Hence, teacher agency is a complex construct consisting of teachers' motivational, attitudinal, and cognitive resources as well as talents and capabilities to endorse and

accomplish learning in various professional settings such as in the classroom with pupils and the community. This dissertation study, with the mentioned internal processes included in the model which are personality traits, academic optimism (self-efficacy, trust in parents and teachers, and academic emphasis), and commitment to the teaching profession, reflected teachers' motivational, attitudinal, and cognitive resources and deeply explored their relationship to teachers' agentic behaviors. With this feature, the results of the study serve as a guide to understand how these resources impact teacher agency and with this guide, necessary actions can be taken to support teachers' agency.

In educational practice, the notion of the agency has long been recognized. However, it has not been overtly specified in relation to the progress of educational and learning practices (Eteläpelto et al., 2013). Despite substantial efforts and different conceptualizations, a limited number of empirical studies has been conducted on teacher agency (Anderson, 2010; Eteläpelto et al., 2013; Martin, 2004; Vongalis-Macrow, 2007). As Priestley et al. (2013) also further stated, teacher agency, that is the agency which is theorized specifically in respect of the activities of teachers in schools, has been subject to little explicit research or theory development (Priestley et al., 2013). There has been no straightforward or all-addressing answer to the query of how to foster teachers' agency (Pyhältö et al., 2012) and on what domains to focus.

In an attempt to provide answers to the query, this dissertation study aimed at identifying the key variables that explained teacher agency. It is expected that this research with the structural model testing of these teacher-related domains will make a contribution to the holistic understanding of the teacher agency phenomenon. Thus, with the investigation of the study variables, i.e., teachers' personality traits, commitment to teaching, and academic optimism, this study thrived on explaining which concepts are tied to teacher agency at what level. Since when the contributions of each predictor are identified, scholars can pay more attention to what relates closely to teacher agency and develop measures to support teachers in that sense. With the

help of the findings of this study, the practical and theoretical projections that will guide the ways to support teachers' agentic actions could be generated.

Yet, this is the first study that explored teacher agency in Turkey. Therefore, the results of the present study would add to Turkish literature both theoretically and practically. Paving the way, the lead of this study is promising to increase more interest in teacher agency and prompt further research, and call for policy-makers and teachers to advance the practice of agency, as well.

1.4 Definition of Terms

Below are listed the definitions of the terms that were used throughout this dissertation study.

Agency is defined as “the capacity for willed action” (Marshall, 1994, p. 7) and “the ability of actors to operate independently of the determining constraints of social structure” (Calhoun, 2002, p. 7).

Teacher agency refers to teachers' intentionality and responsibility to manage new learning at the individual and community level (Pyhältö et al., 2011)

Academic optimism is composed of teachers' sense of efficacy, trust in students and parents, and academic emphasis and the construct is described as “a teacher's positive belief that he or she can make a difference in the academic performance of students by emphasizing academics and learning, by trusting parents and students to cooperate in the process, and by believing in his or her own capacity to overcome difficulties and react to failure with resilience and perseverance.” (Woolfolk Hoy, Hoy, & Kurz, 2008, p. 822).

The *sense of self-efficacy* is defined as “beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3)

Trust in students and parents indicate “the relationship established between the teachers and students, and the teacher and parents” (Kurz, 2006).

Academic emphasis is the “general perspective of the importance of academics in a school held by administrators, teachers, and students” (Goddard, Sweetland, & Hoy, 2000).

Commitment to teaching is a teacher's psychological attachment to the teaching profession (Coladarci, 1992).

Personality is “the integrated self-system within which the previously identified constituents operate in complex mutual interaction in the management of diverse and changing environmental circumstances” (Bandura, 1999, p. 58). While it is the relatively enduring styles of thinking, feeling, and acting, *personality traits* refer to “the pattern of covariation among these traits, usually summarized in terms of a relatively small number of factors that represent the basic dimensions of personality” (McCrae & Costa, 1997, p. 509).

CHAPTER 2

LITERATURE REVIEW

This chapter catalogues a series of prominent scholarly work that relates to the intent of the current study. It particularly provides a review of the body of literature on the variables studied, namely teacher agency, personality traits, academic optimism, and commitment to the teaching profession. Before moving on to the details, it introduces two theoretical underpinnings that constitute the frameworks of this research, which are social cognitive theory and ecological theory on the agency.

2.1 Agency

Human agency is a slippery construct with several definitions. While Marshall (1994) see the agency as the psychological and sociopsychological disposition of the agent and implies her/his capacity for voluntary action, Emirbayer and Mische (1998) put it as the competence of actors to analytically contour their reactions to challenging conditions. Yet, agency has also been referred to as the socioculturally negotiated capability to act (Ahearn, 2001), the autonomous, willful, and conscious features of human activity (Ritzer, 2005), the ability for independent social action and the capability of the actor to function autonomously of the defining limitations of social structure (Calhoun, 2002), or the capability of actors to act autonomously of structural restrictions (Abercrombie, Hill, & Turner, 1984). Finally, Taylor (1977) described the agency as the capacity to define the goals that guide the individuals' activities and to evaluate whether they have been achieved or not. These definitions reflect a common core on agency emphasizing the power of the individuals. However, it also calls for differentiation between autonomy (Ahearn, 2001; Emirbayer & Mische, 1998; Marshall, 1994; Taylor, 1977) versus independence from the social structure

and the constraints brought about by it (Abercrombie et al., 1984; Calhoun, 2002). To provide a more pertinent account of this differentiation, psychological, socio-psychological, and philosophical constructions of human agency need to be scrutinized. For instance, it was described by Greene (1978a) as a type of autonomy that bears a sense of moral concern. It is defined as a core element of positive social transformation where, given a chance, the people must be seen to actively engage in shaping their own fate, not just as passive receivers of “the fruits of cunning development programs” (Sen, 1999, p. 53). Furthermore, agency necessitates being alert to the risks of “acquiescence and mindlessness” (Greene, 1978a, p. 248), mindful of different opportunities (Greene, 1978b, p. 26) or having a sense of critical thinking (Giddens, 1979, p. 56). Moreover, it is considered to be initiating intentional action (Bandura, 2001) for what matters to the actor (Sen, 1999).

Considered altogether, the philosophical, empirical, and theoretical literature on agency proposes that agent teachers have certain qualities as the ability to see possibilities, willingness to take the initiative, act, and doing it in a mindful and purposeful way (Paris & Lung, 2008). Table 2.1 provides a summary of related constructs in the aforementioned literature.

Table 2.1

Elements of Agency Identified in Philosophical, Psychological, Social-Psychological and Educational Literature on Agency

Intentionality	Bandura (2001); Giddens (1979)
Mindfulness	Greene (1978a)
Perceived control	Zimmerman (1995)
Perceived empowerment	Danielewicz (2001)
Perceived self-efficacy	Bandura (1997); Wheatley (2001)
Persistence	Bandura (1997)
Initiative	Arendt (1958); Bandura (2001)
Self-reflection	Oakeschott (1975)

Note. Adapted from "Agency and child-centered practices in novice teachers: Autonomy, efficacy, intentionality, and reflectivity" by C. Paris and P. Lung. (2008), Journal of Early Childhood Teacher Education, 29(3), 253-268. Copyright (2008) by Taylor & Francis.

Paris and Lung (2008) delved more into the details of accounts of four agency-related constructs, namely autonomy, self-efficacy vs. efficacy doubt, intentionality, and reflectivity. The authors suggest that autonomy is the capability to make decisions and engage in actions based on individuals' own inferences about what is morally acceptable and correct. Here, Castle (2004) underlines Piaget's conception of heteronomy as the opposite of autonomy and means being directed by outsiders rather than internal drives and concludes that it should be exercised responsibly and carefully selected to be true to the principles of the individual. In describing autonomy, Paris and Lung (2008) cite Bandura and refer to autonomy as "not the absence of external control but the presence of belief in one's ability to effect desired outcomes" (p. 261).

As Bandura (1997) defines, self-efficacy beliefs, which will be described in detail in the following section of this dissertation, as the individual's prospective positioning of her/himself on what s/he believes that s/he can efficiently encounter challenges based on past successes and to Zimmerman (1995), it varies across context, activity, and time. It is proposed that while strong self-efficacy beliefs add to a teacher's enthusiasm for risk-taking and persistence, negative self-efficacy concerns foster professional growth as s/he examines the efficiency of her/his practices (Paris & Lung, 2008).

By intentionality, the authors consider the construct to individuals' thoughtful and purposeful actions in examining their goals and then participate in sensible and accountable planning for actions that matter for them (Paris & Lung, 2008). When a teacher is intentional, it means that her/his actions are well-planned, well-thought, and fully purposed (Epstein, 2007). Finally, with reflectivity, through prior achievements are evoked when individuals encounter new challenges and weigh their decisions about the odds of taking efficient actions (Paris & Lung, 2008). Driving from these definitions and connections in the literature, the following section benefits

from two theoretical underpinnings of human agency which compose the framework of this study.

2.2 Social Cognitive Theory and Human Agency

The social cognitive theory is established in an agentic framework (Bandura, 2001a). The concept of human agency offers that the human mind is not only reactive but also productive, authentic, and active (Bandura, 1997) and, people are self-regulating, proactive, self-questioning; not just responsive individuals molded and marshaled by environmental incidents or internal drives (Bandura, 2001a, p. 266). In the search for taking control of their lives, humans act to achieve their goals since the capability of individuals to control their own thought processes, enthusiasm, and deed is a characteristic human feature (Bandura, 1989). Therefore, the agency refers to “the acts done intentionally” (Bandura, 1997, p. 3).

On another account, in the agentic constructivist standpoint of social cognitive theory, people are actively involved in ensuring and maintaining the stabilities in their life, and they do so by choosing and building environments that match their standards, characteristics, and ambitions via their actions (Bandura, 1986, 1997; Snyder, 1981).

At this outset, Bandura (1997) builds human agency on a triadic structure embodying personal factors, behaviors, and environment (Figure 2.1). Bandura (1999) argues that in this model of causality, actions, environmental factors, and internal personal factors, operate in reciprocal interactivity and they determine the effect of one another. This premise stems from the notion that persons cannot be thought of as independent of their actions.

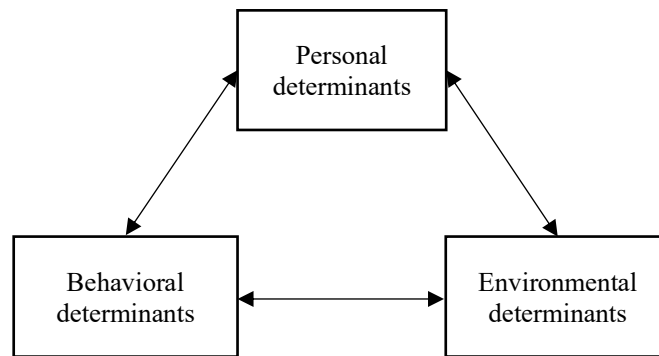


Figure 2.1. Triadic reciprocal causation model of social cognitive theory (Bandura, 2001a).

Humans produce environmental circumstances, and they are affected by them. The social cognitive theory defines three types of environmental structures: the imposed environment, the selected environment, and the constructed environment. The imposed environment is the one in which people experience no matter they like it or not. While they do not have much power in their presence, they have the freedom to interpret and respond to it (Bandura, 1999). While the selected environment is constituted of the preference of associates, activities, and milieus, the constructed environment embraces the social environments and institutional systems built through generative endeavors. All three of these environments define the makeup of mutual interaction between personal, behavioral and environmental factors. The extent of environmental variability necessitates the exercise of incremental levels of the agency.

A distinctive gap exists between the potential and the experienced environment (Bandura, 1999). To Bandura, the environment, in essence, bears the potential to reward and punish but they do not emerge until it is activated by apt causes of action and the way people behave is what transforms the potential into the experienced environment.

There also exist personal factors (cognitive, affective, and biological assets), again bi-directionally connected to the agent's behaviors and the environment. Bandura asserts that persons' internal determinants from self-efficacy to physical characteristics influence social treatment and is, in turn, result in the maintenance or alteration of environmental biases (Bandura, 1978). To note, the intensity of these three intertwined factors differ from individual to individual. In some occasions, environmental factors play a substantial role in behavior and overrule the other determinants. In other cases, personal factors such as incorrect beliefs can hinder the corrective effects of the environment (Bandura, 1978). The degree of environmental variability necessitates the exercise of the personal agency at different levels. The practice of agency also depends on the personal interests, personalities and biases (Archer, 2003; Billet, 2006), and it is also affected by previous experiences and patterns of action as well as future directions and present involvements (Emirbayer & Mische, 1998).

In addition to all, Bandura (2001b) identifies four facets of agency: (1) intentionality, (2) forethought, (3) self-reactiveness (self-regulation), and (4) self-reflectiveness. First one is *intentionality*, where individuals choose to behave adaptively or otherwise, induced by self-influence. It is a proactive course of action and bears the commitment to make all the initial expectations and predictions about the action a reality. Though intentionality has a key role in defining outcomes, the agency does not necessarily guarantee the correct outcome; the way it was planned and enacted may differ and the product can either turn into beneficial or detrimental. Second is *forethought*, carefully considering what will be necessitated or may take place in the future. Bandura suggests that in the forethought process, people motivate themselves and lead their actions with the expectancy of events that are likely to happen future. While these events do not depend on such motivation, "in the form of anticipatory self-guidance, the behavior is motivated and directed by projected goals rather than being pulled by an unrealized future state" (p. 7). Fourthly, an agent not only takes purposeful actions to make choices but also stimulates and regulates their execution,

which is self-reactiveness, self-regulation. *Self-reflectiveness* refers to examining people's own quality of functioning, abilities, and the purpose of their pursuits of life. That is, it is the metacognitive capacity to reflect on one's competence of thoughts and actions, and is a fundamental feature of the agency. Bandura (1989) underlines that personal agency is realized via one's capacity, her/his reflective and regulative thought, and other self-influence tools that impact her/his choices and contribute to the maintenance of the course of action.

On another plane, to Gould (1978), the agency is not limited to the knowledge construction and generation by one's self; it also includes social participation in socio-culturally determined knowledge communities. It is suggested to be influenced by social interactions than mere cognitive processes of the agents and they are beyond the contexts of the actions taking place; they progress in the processes of co-construction and reconciliation between the members and several other organisms in given circumstances. The primary step is that the agent first identifies her/himself through this objectification of her/his capabilities and needs. Then, the agent becomes different since the world s/he acts has transformed into a different state, and finally, the agent stands with a varied array of issues and possibilities giving way to new drives and means of acts (Gould, 1978). In this view, people are the locus of social actions, and it can be said that the agency is the socio-culturally intertwined capacity to act (Ahearn, 2001).

That is to say, agency functions inside a complex system of socio-structural factors. In such agentic networks, people are not merely the products of the social structure but also the producers (Bandura, 2001a). Social systems embody human self-development, adaptation, and change and they contribute to building the social milieu and different happenstances that emerge in daily interactions (Bandura, 1978).

2.3 Teacher Agency

Teacher agency can be described as the capacity that paves the way for teachers to intentionally and responsibly manage learning at the individual and the community level (Pyhältö et al., 2011; Pyhältö et al., 2012). It is the “teachers’ capacity to make choices, take principled action, and enact change” (Anderson, 2010, p. 541). Agency embodies teachers’ intent and enthusiasm to learn, and the activities they carry out intentionally towards enhancing learning in their classrooms (Pyhältö et al., 2012; Soini et al., 2016). It is a key characteristic of teachers needed for improving student learning and professional development (Toom et al., 2015) and for continuous progress and improvement of the curriculum (Ponnusamy, 2017). Teacher agency is to be able to step out of context-bound rules and to act based on their own aims (Oolbakkink-Marchand, Hadar, Smith, Helleve, & Ulvik, 2017). If teachers have the sense that they can exercise agency, they tend to appraise teaching as “a meaningful profession rather than just a job” (Priestley, Biesta, & Robinson, 2015, p. 149) and thus increases their sense of commitment (Tao & Gao, 2017).

Becoming an active, agent teacher means becoming an active learner who can make intentional decisions, act, and systematically reflect on the effect of her/his actions (Pyhältö, Pietarinen, & Soini, 2015). Teachers who practice agency feel more in control in their professional actions and feel that those choices reflect their own goals and aspirations (Vähäsantanen, Hökkä, Eteläpelto, Rasku-Puttonen, & Littleton, 2008). They also see themselves as substantial contributors to the reciprocal learning in their community (Pyhältö et al., 2015). With its relational aspect, the agency also refers to “capacity to align one's thought and actions with those of others in order to interpret problems of practice and to respond to those interpretations” (Edwards, 2009, p. 5). Agentic teachers complete complex tasks and “have the skills and will to strengthen their own [...] capabilities for life-long learning and sustained professional growth” (Lipponen & Kumpulainen, 2011, p. 812). It has an essential role in maintaining the professional development of teachers, attainment of self-realization

(Ketelaar, Beijgaard, Boshuizen, & Brok, 2012), work behavior, organizational commitment, satisfaction, and professional well-being (Vähäsantanen, 2015).

The professional agency of the teachers is profoundly interwoven in nature and embraces professional social interactions with both the students and other stakeholders in the community (Greeno, 2006; Lipponen & Kumpulainen, 2011; Pyhältö et al., 2015). The level of agency depends on the particular situations which introduce unique circumstances every time, as well as the resources the teacher has, including her/his social and personal capital (Pyhältö et al., 2015). It, therefore, is “possible to see the same individual exercising more agency in one context and less in another” (Kayi-Aydar, 2015, p. 95). Teachers' beliefs are what is important for the level of being able to achieve agency in the complexity of their professional practice in schools (Biesta et al., 2015). In the construction of teacher agency, the importance of beliefs and values should not be underestimated (Robinson, 2012).

As the ecological approach identified (Biesta & Tedder, 2007), teacher agency cannot be thought as separate and free from the demands, opportunities, and constraints of the case at hand (Vähäsantanen et al., 2009). It can be concluded to bear a fairly complex dynamism; it shapes and is shaped by cultural and structural facets of the cultures of the school and the community (Datnow, Hubbard, & Mehen, 2002). Indicated by research (Priestley et al., 2013), the quality of relations within and between schools and outside settings play a significant role in teachers' achievement of the agency.

Although teachers' actions are bound by the context, school, and the community, they are unrestricted in choosing the main areas they can exercise agency by participating in and modifying the community (Pyhältö et al., 2015). Priestley (2011) suggested that the dominant values of teachers and reinforcement of the principals are significant determiners of fostering teacher agency. What it in turn implies is that the teachers are not only to adapt to the existing structure (Hopwood, 2010) but can also

start initiatives and transform power structures within the school community (Sannino, 2010). A teacher can actively adjust her/his work environment, e.g., by assuming different strategies, thus adding to their opportunities to participate in the community at hand (Pyhältö et al., 2015), since “being able to do something not only for oneself but also for other members of the society is one of the elementary freedoms which people have reason to value” (Drèze & Sen 1995, p. 106).

The literature suggests four general personal characteristics of agent teachers: (1) lifelong learners, (2) mastery, (3) human resource manager, (4) collaboration (van der Heijden, Geldens, Beijaard, and Popeijus (2015). By lifelong learner it is meant that agent teachers look continuously for learning opportunities and they reflect on their teaching systematically; they have the eagerness and employ their agency to actualize it. Teachers as lifelong learners seek to evaluate the effect of their teaching on student learning and gather evidence of it; they are inquiry-oriented and make adjustments to adapt their work in and out of the classroom.

Furthermore, mastery is being an expert in the knowledge and skills of teaching. Agent teachers are talented and effective as teachers, and they have a strong command of subject matter and teaching methods. They employ a variety of learning techniques to enhance student learning and achievement. To Hattie (2012), beliefs of teachers on their students’ capabilities and their commitment to the teaching profession have a strong effect on student achievement. They are “passionate and inspiring teachers in order to make as many students passionate and inspired learners” (van der Heijden et al., 2015, p. 684).

Yet, as human resource managers, teacher agents act as risk-takers, decision-makers, and motivators of their colleagues. It is suggested that teachers who fail to take risks encounter with roadblocks in changing their teaching exercises. Teachers’ eagerness for risk-taking, engagement in creative initiations and taking responsibility for these calculated risks are important for a successful educational change.

Finally, establishing cooperative collegial relationships is suggested as a critical feature of agent teachers and as having a positive influence of teacher and student learning. They can build and rebuild productive cooperation with their colleagues and others; they are aware that such relationships are necessary for the enhancement of their own teaching and student learning, and for affecting and creating change in their schools.

The question then is; what sorts of activities of the teachers are we referring to when we consider them as agents? Paris (1993) wisely stated that “teacher agency in curriculum matters involves initiating the creation or critique of curriculum, awareness of alternatives to established curriculum practices, the autonomy to make informed choices, an investment of self, and on-going interaction with others” (p. 16). Simply put, it is completely the opposite of “teachers as consumers of the curriculum” and “technical implementers of ideas and products of experts” (Paris, 1993). Moreover, teachers who purposefully act as agents actively engage in curriculum making, implementation and evaluation. Hill (2003) especially places a strong emphasis on evaluation, because she sees assessment as the most trustworthy parameter of the true purposes of a curriculum. She further asserts that “the degree of agency expected from the educator in designing assessment strategies and criteria can be seen as the key to understanding the epistemology of education management” (p. 103). Da Ponte (2001) also distinguished the role teacher agency undertakes to depend on the value ascribed to it. He suggested that at the lower level, a teacher can range from “a consumer of ideas and materials to an active participant in negotiating and decision-making concerning the activities of the course” (p. 29). While the agency is being shaped by and shaping a wider context (Lasky, 2005); teacher agency is “teacherhood within a larger activity system” (Moate, 2013, p. 59). It is using others as resources and interchangeably serves them as a resource (Edwards, 2005; Edwards & D’Arcy, 2004; Heikonen, Pietarinen, Pyhältö, Toom, & Soini, 2016).

Several research studies have focused on what interferes with teachers' agency. Paris (1993), for instance, argued that teachers carry out their profession in various and frequently contradictory ideological and historical settings, encountering serious structural obstacles. She also underlines that "the ideological walls that block true agency are those that define curriculum knowledge as a rationally created and sanctioned commodity, controlled, and enforced by experts who deliver it to masses of teachers who are assumed to be incapable or unwilling to engage in such work" (p. 149). Lasky (2005) underscored the degree of reform implementations can intimidate teachers and cause teachers' "unwillingness to change" (p. 913). Moreover, Sloan (2006) suggested that accountability-explicit curriculum policies, "like 'teacher-proof' curriculum materials before them, operate as purely negative mechanisms of teacher control and that this control undermines teacher agency" (p. 123) and work against it. In turn, prevents teachers to be open-ended, offer child-explicit teaching targeting higher-order intellectual skills and lead to the delivery of limited, unfruitful, and more routinized instruction which focuses on test preparation (Sloan, 2006). Furthermore, Priestley et al. (2012) proposed that there is little capacity for agency with regard to curriculum development within the contemporary educational structures due to these systems' being, for at least two decades, of the subject of the collective effect of narrow national educational programs and the use of outcome-based, quantitative utilization of attainment data; product-orientation making the most harm to teacher agency.

However, despite the complexity of agent teacher-persona is well recognized (Day, Kington, Stobart, & Sammons, 2006), educational research, failed to place a fair emphasis on teacher agency, which is the process, and rather directed more attention to proficiency, that is the product (Walker & Tedick, 2000); and it thus could not subtly endorse the field of practice.

2.3.1 Research on teacher agency. In her seminal work, Anderson (2010) shared an ethnographic study with one teacher where four weeks of participant observation and classroom observations, and investigation of meetings, informal interactions, work-related events, informal interviewing, relevant documents/artifacts, staff meeting memos, instructional handouts, written announcements for events occurring in the school or local community were utilized. In Liz's (the teacher studied) case, her activities evidenced all features of a teacher's agency. Initially, she saw her disadvantaged Latino students and urged colleagues to see them as capable rather than incapable or lazy, and she encouraged the contributions of parents, i.e., has placed trust in her students and parents, a feature also defining academic optimism. She aligned her instruction based on the mission of ensuring success for all students and developed and shared authentic grading rubrics. She further drew support from the community, a business owner, a non-profit organization, five educational profession members, and community-based organizations, transcending the traditional boundaries of the school. Her exemplary works included connecting with a local book store which enabled the access to Latino authors whom later visited her classroom, attracting funding from a community organization, benefiting from a regional nonprofit writing program whose tutors offered extensive feedback to students on their writings; all of which in turn, inspired the students to see themselves as authors writing their own stories and increased their success at school. To Anderson, this support was sought by this teacher rather than offered and she viewed it as a tool for change. Moreover, she organized an annual school-wide event where college graduates and local professionals served on panels introducing professions. Her work was recognized by the board, showcased in professional development courses attended by teachers districtwide, and her teaching was deemed exemplary. Rather than viewing the challenges as impossible to overcome, she felt more efficacious with every battle she won and her commitment to stay in the profession increased. Through all her efforts, Liz demonstrated her capacity to act as a boundary-spanner by bridging across the structural holes and was typical of an agentic teacher. Anderson noted that in achieving these

accomplishments, the support and empowerment played an important role. The author underlined the importance of the recognition and encouragement of teacher's work and urged local leaders to assign resources and offer opportunities for developing ties within and beyond school boundaries. Besides, teacher educators were recommended to normalize support-seeking behaviors and create chances for preservice teachers to establish diverse network ties through teacher education programs. Also, the teacher educators were urged to make simulations into consideration that offer practices on authentic difficulties of practice encountered by teachers having a hard time to transform real schools.

In another study, Fleming (1998) studied teacher agency and autonomy with five teachers through a case study. He found that most teachers tended to articulate their wish for autonomy especially over the selection of activities, materials, and assessment since they lack enough time to complete these tasks, and they wanted curriculum guidelines to provide them with options and suggestions. The author suggested supporting the teachers by enhancing their abilities through professional development. All of the participants expressed a need for professional development opportunities and wanted to interact more with their colleagues to exchange thoughts, look for advice, and increase one another's morale, which in turn enrich the programs they implement and assist their students.

Vähäsantanen, Saarinen, and Eteläpelto (2009) investigated sixteen vocational teachers' sense of agency through interviews. The authors revealed five different types of agency endorsed and enacted by the participants: (1) restricted agency, (2) extensive agency, (3) multifaceted balancing agency, (4) situationally diverse agency, and (5) relationally emergent agency. It was observed that a teacher's exercises of the agency were closely related to the resources, and to the limitations stemming from her/his sense of professional self, relationships with colleagues, and perceptions about the work-related tasks defined by the school. It was observed that teachers who experienced restricted agency behaved inactively, assuming the socially approved

role of teachers. The teachers who exercised extensive agency directed and actualized their actions based on their professional aims and interests. Those using multifaceted balancing agency were found to be active and collaborative which enabled them to develop authentic working practices and explore and build new directions for functioning as a teacher. In a situationally diverse agency, teachers acted both as active and inactive actors varying based on different situations and their perceptions of the professional tasks. Finally, in the case of a relationally emergent agency, teachers acted in a way influenced by their views of themselves concerning the professional tasks. The authors indicated that teachers' exercises of five forms of agency depended individually on their senses of their professional selves, comprising of their views of their professional interests, capabilities, and previous experiences.

Pietarinen, Pyhältö, and Soini (2016) tried to identify the complexity of teacher agency by studying 2310 primary and secondary school teachers. They hypothesized that teacher agency in the professional community comprised of teacher learning in terms of transformative practice, active help-seeking, collective efficacy, and mutual agreement, and organizational climate. Moreover, the agency in the classroom consisted of a collaborative learning environment and reflection in the classroom. The authors suggested that teacher agency cannot be explained by a single behavioral characteristic and the structural equation model they tested yielded good fit where all of the professional community and classroom variables significantly explained the latent structure. Furthermore, classroom agency was explained with a 59% of variance by a professional community agency, meaning that teachers' capability to adjust to different roles and support student agency, they needed to have such experiences in the community. The results further indicated that professional agentic learning necessitated teacher' capability to initiate learning, to build and adjust their context and actions based on students' needs, and to engage in active help-seeking behavior from their colleagues. Making use of individual and social resources, such as deriving feedback and continuously reflecting on the success of teaching in and out-of-classroom contexts appeared to foster learning through an agency. The results

showed that when teachers seek and provide help in the professional community, they were more active in student learning as well. It is discussed that the motivation of teachers to learn, self-efficacy beliefs regarding learning, reflective teaching, and facilitative activities are the required components of teacher agency. Indicating a gap in the literature, the authors also suggested the development of more scales to measure teacher agency and adding items that measure interrelated components.

Again, measuring teachers' professional agency through of transformative practice, active help-seeking, collective efficacy, mutual agreement, and organizational climate with 2310 participants, Pyhältö et al. (2015) attempted to identify the relationship between the professional agency and co-regulative and self-regulative proactive strategies, and their effect on stress. The results indicated that the relationship between teachers' professional agency and proactive strategies were positive and significant, and self- and co-regulative strategies helped reduce teachers' stress. It was also inferred that comprising of teachers' effort to learn in the professional community and contribute to school progress cannot be concluded to be a single attribute; it is suggested to be comprised of teachers' skills, efficacy beliefs, and motivation and that they promote teachers' agentic actions in the classroom.

In another connected study with again 2310 participants, Soini et al. (2016) identified that teacher agency was directly related to the levels of burnout teachers experience. It was further put forward that teacher agency is a complex phenomenon also associated with teachers' efficacy, skills, and motivation. Therefore, the authors suggested that these elements of teacher agency need to be promoted to foster teacher learning. Their capability to build a cooperative and mutual learning environment enhances work-related agency and decreases deficiency in the student-teacher relationship. Yet, perceiving that students are active participants increases both students' and teachers' meaningful learning and thus leading to burnout.

In their insightful study, van der Heijden, Geldens, Beijgaard, and Popeijus (2015) delved into what characterizes agent teachers and found considerably important findings. The responses of twenty participants composed of external experts, principals, and teachers revealed that agent teachers were skillful and effective teachers making a difference in student learning and welfare, indicating that expertise in teaching is crucial. Moreover, proactivity and initiation seemed to be yet another feature of agent teachers. They were observed to be open to novel ideas and used an agency to affect education. They learned from, and throughout their work and their colleagues and they reflected on the quality of their teaching. Finally, they have a collaborative point of view which allows them to take collective initiatives, and they hold the awareness that they need others to improve the quality of education. Overall, it was suggested that agent teachers were lifelong learners with eagerness and willingness to learn, they reflected on their teaching, provided guidance, and they were accessible, positive, committed, trustful, self-assured, innovative, responsible, and collegial.

In a familiar fashion, teacher agency was investigated from a structural point of view and it was highlighted in Robinson's (2012) ethnographic study in a school that when strong collegial relationships existed among teachers, it allowed them to build their professional agency. Similarly, in their study with eighteen secondary school teachers from Israel, Norway, and the Netherlands, Oolbekkink-Marchand, Hadar, Smith & Helleve (2017) found that reinforcement and trust of the school management, as well as, robust pedagogical beliefs of teachers were significant elements for the actualization of the agency. Both studies revealed that not only teacher personal but also contextual resources affected the level of the agency they exercise.

In her qualitative dissertation with four teachers, Samoukovic (2013) suggested that when the local conditions of the schools worsen the connections and lead to isolation, expanding the borders of agency and constructing concrete and reciprocally beneficial relationships with the community and other schools help decrease the isolation of

teachers from the public. The author further stated that collective agency and cooperation among the school members need to take place which can inform decision making and lead to positive changes in schools. In their qualitative study with 24 teachers, Vähäsantanen et al. (2008) also supported the idea that teachers' collaboration with their immediate professional community fosters their agency:

With sixteen teachers, Severance, Penuel, Sumner, and Leary (2016) looked into participants' development of science curriculum materials from an agentic point of view. The researchers concluded that cooperation among the teachers in terms of the design of materials promoted their agency and doing so by utilizing transformative agency, they creatively and innovatively shaped both the content and design of the curricular materials. They observed that considerable contributions came from the teachers and they built on one another's contributions. The results highlighted the significance of collaborative teacher agency indicating a need for studying the concept.

Finally, and most importantly, Hadar and Banish-Weisman (2018) studied the engagement of personal factors in teachers' agency. They investigated whether teachers' values (self-enhancement, self-transcendence, openness to change, and conservation) related to their sense of agency and their research revealed significant results where the values directly affected teachers' agentic behaviors. Moreover, the agentic capacity of teachers composed of their self-efficacy, proactive personality, and self-promotion focus mediated the relationship between teachers' values and their agentic behaviors. Yet, different teachers were observed to respond differently to the same contextual situations proving that individual agency plays an essential role in the agentic behaviors of teachers and has independent from the social and contextual factors. The researchers indicated that although several scholars acknowledged the significance of beliefs and knowledge, none studied the effect of these variables on teacher agency.

2.4 Teacher Academic Optimism

Academic optimism is rather a new construct identified by Hoy, Tarter, and Woolfolk Hoy (2006). Initially emerging as a school-level characteristic, its viability has further been confirmed as a teacher-level, individual construct (Beard, Hoy, & Woolfolk Hoy, 2010). Woolfolk Hoy, Hoy, and Kurz (2008) define teacher academic optimism as

a teacher's positive belief that he or she can make a difference in the academic performance of students by emphasizing academics and learning, by trusting parents and students to cooperate in the process, and by believing in his or her own capacity to overcome difficulties and react to failure with resilience and perseverance. (p. 822)

As can be inferred, it is a latent construct composed of three variables: teachers' sense of efficacy, trust in students and parents, and emphasis on building a positive and stimulating academic setting for students.

With its multi-facet feature, the construct has cognitive, affective, and behavioral aspects. Self-efficacy is a cognitive asset as it is an individual belief and trust is an affective response, while the academic emphasis is behavioral and has a focus on learning and specific behaviors in schools. Consequently, teachers' sense of academic optimism is said to fruitfully contour human agency (Woolfolk Hoy et al., 2008).

The reciprocally causal relationship among the three dimensions of academic optimism is shown in Figure 2.2. When observed in detail, there are triadic interactions where each dimension is dependent on another. Woolfolk Hoy et al. (2008) suggest that while teachers' trust in students and parents boosts their self-efficacy, increased sense of efficacy, in turn, results in having more trust in their capabilities and support. In a similar vein, if teachers trust parents and students, they set higher goals assuming that they will not be let down; yet, when they have higher academic expectations, their trust increases. Finally, if the teacher has a high sense of efficacy and trusts her/his capabilities to impact student learning in a positive way,

s/he can put more emphasis on academic achievement, and when s/he does so, s/he feels more self-efficacious.

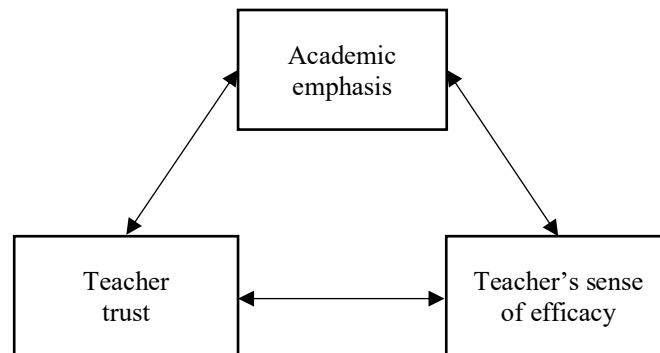


Figure 2.2. Triadic reciprocal causation model of academic optimism (Woolfolk Hoy et al., 2008).

2.4.1 The sense of efficacy. To Bandura (1989), among the instruments of personal agency, the most vital or persistent is a human's beliefs about her/his capabilities to have control over events that have impacts on her/his life. Perceived self-efficacy is defined as "beliefs in one's capabilities to organize and execute courses of action required to produce given attainments" (Bandura 1997, p. 3). Self-efficacy beliefs are suggested to operate as central proximal factors of affect, motivation, and action. The character of efficacy beliefs exemplifies the authentic dispositional makeup of efficaciousness for every different person. The social cognitive theory asserts that dispositions are personal elements such as self-beliefs, ambitions, and outcome prospects that designate the behavioral conduct. Self-efficacy beliefs influence mindscapes that either support or hinder a person. These cognitive influences come in many forms. Human behavior is regulated by their vision of identified goals where personal goal setting is affected by the self-evaluation of their capabilities. The higher the person's self-efficacy is, the bigger the goals s/he sets for her/himself and the stronger her/his commitment to them. A person who has a high sense of efficacy form a mental picture of success scenarios that offer positive guides for her/his activities, while a person who views her/himself as inefficacious tends to

envision failure scenarios that hinder performance by residing on how events will go in a completely wrong direction. Moreover, people's beliefs in their capabilities affect their motivation level as well as the extent to which they experience stress and breakdown in the face of difficult situations. These affective impulses can, directly and indirectly, affect the nature of thought.

Based on these accounts, teachers' sense of efficacy is defined as their evaluation of their "capability to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p. 202). It incorporates their trust in their capability to make a positive impact on students' learning (Ashton, 1985). In the context of teaching, if teachers consider themselves as able to affect and accept responsibility in student learning, they set higher goals, exercise more effort, and persevere in case of difficult tasks (Woolfolk Hoy et al., 2008; Woolfolk Hoy, 2012). Their self-efficacy beliefs are significantly related to various important educational outcomes, e.g., their perseverance, motivation, aspiration, commitment, and the effort they put in planning and organizing their teaching alongside their students' attitude, success, enthusiasm, and self-efficacy beliefs (Tschannen-Moran & Woolfolk Hoy, 2001). Efficacy beliefs affect teachers' resilience in case of perseverance, their decisions to stay in teaching (Tschannen-Moran & Woolfolk Hoy, 2001) and their adoption of innovation (Woolfolk, Rosoff, & Hoy, 1990). If a teacher holds high self-efficacy beliefs, s/he is less critical when students make errors, works longer with struggling students, and tends to not refer a hard-to-handle student to special education.

Teachers with strong self-efficacy beliefs are likely to be more optimistic than their colleagues, exert more effort in their profession, take more personal responsibility for success or failure. In contrast, teachers who are less self-efficacious tend to attribute their success and failure to external factors, such as lack of resources (Ware & Kitsantas, 2007). Their sense of self-efficacy defines high-quality classroom

environment since they plan instruction that fosters students' abilities, and involvement in a meaningful way and they manage student misbehavior effectively.

2.4.2 Trust in students and parents. Trust is a significant yet difficult component of any given relationship. Trusting is opening oneself and anticipating a positive relationship will grow out and it encompasses a certain level of vulnerability (Kurz, 2006). That is, it is to be willing to be vulnerable to the other that s/he is reliable and honest (Hoy & Tschannen-Moran, 2003). In the teaching context, an important behavior effective teachers display is forming trusting relations with students and parents. If a teacher trusts her/his students, it means that s/he has confidence that her/his students' openness to learning, competency to understand concepts, and their morality (Beard et al., 2010). To ensure that all students reach maximum potential, trusting relationships need to exist between the members of the school community (Kurz, 2006),

Research has shown that trust in students and parents had an important effect on student achievement in reading and math (Goddard, Tschannen-Moran, & Hoy, 2001). When teachers trust their students, they tend to apply instruction from a more positive perspective (Kurz, 2006). As in self-efficacy beliefs, teachers set higher goals for the students they trust and count more on parental support (Woolfolk Hoy et al., 2008).

2.4.3 Academic emphasis/press. Academic emphasis is the degree to which the desire for academic excellence and achievement is emphasized (Beard et al., 2008). Academic press stems from a teacher's beliefs about students' academic success and her/his emphasis on academic tasks; it is the behavioral representation of efficacy and trust (Hoy et al., 2006). Academic emphasis is supposed to increase the time students spend effectively and involve actively in academic tasks, since it positively is correlated with student learning (Woolfolk Hoy, 2007). It "captures the behavioral enactment of efficacy and trust" (Hoy et al., 2006, p. 14). A teacher's

ability to enhance students' growth necessitates that s/he sets high expectations for them (Kurz, 2006). Effective teachers ensure that students are actively involved in meaningful learning activities and make sure that their time at school is well-spent (Woolfolk, 2010). In an educational environment emphasizing academic press, "high but attainable goals are set for students, the learning environment is orderly and serious, teachers' believe in their students' abilities to achieve, and students work hard and respect those who do well academically" (Hoy & Hannum, 1997, p. 294). Academic learning time is prioritized by teachers who have high levels of the academic press (Kurz, 2006).

As Woolfolk Hoy et al. (2008) put it, optimistic classrooms highlight opportunities and an optimistic teacher emphasizes the positive characteristics of the students, classrooms, schools, and communities. It is a means for the expansion of control and underlines responsibility; which are among the requirements for the exercise of human agency. Academic optimism also boosts collaboration among students, teachers, and parents on issues related to student learning, which in turn fosters teacher and student motivation (Woolfolk Hoy, 2012).

2.4.4 Research on teacher academic optimism. Among the studies related to academic optimism, Woolfolk Hoy et al. (2008) is the one who first developed and tested the academic optimism construct at the individual level. The authors firstly investigated the viability of the construct and in principle components analysis, a single factor, i.e., academic optimism, was identified to explain 67% of the variance. Secondly, they tested the relationship of academic optimism with classroom context, dispositional optimism, humanistic classroom management, student-centered teaching strategies, and individual citizenship. The results of the multiple regression analyses demonstrated that the cited predictor variables composed of citizenship behavior, humanistic management, dispositional optimism, and student-centered teaching explained 42% of the variance in academic optimism. The authors, referring the unexplained variance, further questioned other possible predictors that might

relate to teachers' academic optimism as student characteristics (ability or engagement), teacher personality traits (openness, tolerance, conscientiousness, and extroversion), grade level, and teacher preparation program.

Woolfolk Hoy's study has stemmed from Kurz's (2006) dissertation. In her dissertation, the researcher investigated the relationship between academic optimism and commitment to teaching with data coming from 205 teachers. The relationship between professional commitment and academic optimism was found to be significant with a correlation coefficient of .34. The authors further discovered that students' socioeconomic status was negatively correlated with the academic optimism of teachers. Finally, humanistic classroom management and student-centered teaching were also demonstrated to be in a significant relationship with academic optimism.

Following them, Beard et al. (2010) studied academic optimism and confirmed its structure through structural equation modeling with data coming from elementary school teachers. The authors further found that a moderate positive relationship existed between a teachers' general and academic optimism. Based on this finding, it was inferred that if a teacher is optimistic in general, s/he has a higher level of academic optimism, as well. Finally, they reported that the more teachers saw the school structure as enabling, the increased sense of academic optimism they held. Fahy, Wu, and Hoy (2010) studied the same construct with secondary school teachers this time again through structural equation modeling. Similarly, they found that the higher the teachers' sense of dispositional optimism, the higher the degree of academic optimism. Consequently, the construct was started to be adapted to different contexts and its relationship with a diverse range of variables was scrutinized (Anwar, 2016; Anwar & Anis-ul-Haque, 2014; Donovan, 2014; Krüg, 2015; Moehle, 2011; Nochi, Supparerkchaisakul, & Patrawiwat, 2017; Perelli, 2018; Sartin, 2016; Scott, 2016; Skaggs, 2016; Wu & Lin, 2018).

To start with, Anwar and Anis-ul-Haque (2014) explored the factorial structure of academic optimism with teachers from Pakistan. In their endeavor adapting the Teacher Academic Optimism Scale-Elementary (TAOS-E) by Beard et al. (2010), they collected data from 243 primary school teachers in Pakistan. The results yielded low reliabilities for the sense of efficacy and academic emphasis sub-dimensions; therefore, they revised the instrument to include 25 items and administered it to 201 teachers. The authors reported improved reliability scores; however, suggested conducting a confirmatory factor analysis to provide a validity evidence.

In her thesis study, Anwar (2016) investigated the relationship between Pakistani primary school teachers' academic optimism and dispositional optimism, commitment, school climate, and job satisfaction. The predictive value of the demographics as education, professional experience, salary, age, and the grade was also scrutinized in the research. The findings showed a direct relationship between academic optimism and school climate. When teachers held positive perceptions about school climate, they had higher levels of academic optimism. School climate was found to be indirectly affecting job satisfaction through teacher academic optimism, which indicates that "having positive attitudes such as academic optimism might be one of the mechanisms through which teacher perception of school climate affects their satisfaction with their jobs" (p. 165). However, teacher academic optimism did not have a mediator role between school climate and teacher commitment. The study also highlighted a direct effect between teachers' dispositional and academic optimism. That is, if the teacher had an optimistic disposition, then it was highly likely that they would have a greater sense of academic optimism. Moreover, a friendlier and supportive school climate as well as establishing healthy relationships in the school is connected to trust in parents and students, their self-efficacy, and level of academic emphasis. Teachers' self-efficacy, trust in parents and students, and academic emphasis had a mediating effect on the relationships between job satisfaction, teacher commitment, and supportive principal behavior. The results revealed that the higher the experience, salary, education, and age, the more

positive perception they held about the school climate, the more academically optimistic they are, and the more satisfied they are with their jobs.

A qualitative study conducted by Donovan (2014) where four elementary and middle school teachers were identified as academically optimistic utilizing the Teacher Academic Optimism Scale for Elementary Teachers (TAOS-E) and the Teacher Academic Optimism Scale for Secondary Teachers (TAOS-S). The results demonstrated that in order to support teacher academic optimism, teachers should be knowledgeable, use many different practices, and hold numerous beliefs to adapt to a range of situations. It was also revealed that academically optimistic teachers were also generally optimistic, humanistic, and student-centered.

Gilbert (2012) examined the relationship between the level of pupil control ideology (PCI) and academic optimism. It was revealed that pupil control ideology explained 12% of the variance in academic optimism and when the sense of academic optimism decreased, the level of PCI increased. Moreover, when the demographic variables entered into the equation, it was observed that gender, highest degree attained, teaching experience, level taught, and PCI explained 20% of variance predicting academic optimism. Among these variables, gender, level taught, and PCI were found to be significant in the explanation while the highest degree attained and teaching experience were non-significant. However, descriptive statistics were not provided so as to understand the directions of these significances.

In the study of Krüg (2015), 116 elementary school teachers in kindergarten were recruited in order to study the relationship among academic optimism, organizational citizenship behavior, and principal support. Results revealed positive relationships among academic optimism, organizational citizenship behaviors, and principal support, and between principal support and organizational citizenship behaviors. Furthermore, regression analysis showed that principal support better predicted academic optimism than did the organizational citizenship behavior.

Utilizing a mixed methods study, Moehle (2011) investigated whether the mentoring practices university supervisors apply from a strength-based perception affected student teachers' locus of control, academic optimism, pupil-control ideology, resilience, and sense of efficacy. Comprised of 42 student-teacher responses, data demonstrated that student teachers' academic optimism levels increased after a specific mentoring experience while resilience and teacher locus of control decreased and the strengths-based perspective to supervision had a positive relationship with academic optimism.

In the Thailand context, Nochi, Supparerkchaisakul, and Pattrawiwat (2017) provided validity evidence for the Teacher Academic Optimism Scale and reported high reliability values. The study further demonstrated that perceptions of teachers on time, instruction, students' motivation, and community support significantly predicted teachers' sense of academic optimism. In the SEM model, it was seen that teacher academic optimism had direct effects on engagement in the teaching profession, intention to remain in the profession, work performance and organizational citizenship behavior.

In Perelli's (2018) study 485 high school teachers, principal support was found to be significantly and positively correlated with teacher academic optimism. Moreover, results showed that emotional support significantly predicted teacher self-efficacy, emotional support, and instrumental support significantly predicted teacher trust, and emotional support significantly predicted academic emphasis. When academic optimism was entered as the dependent variable in the regression model, it was found that four factors of principal support, i.e., professional support, emotional support, instrumental support, and appraisal support, explained 17% of the variance where emotional support and instrumental support were significant predictors of academic optimism.

Scott (2016) conducted a case study to explore how academic optimism and parent involvement are established in secondary schools, and examine the link among teacher academic optimism, parent trust, and parent involvement. Surveys were conducted to determine the levels of academic optimism, parent trust, and parental involvement. Results revealed average levels of teacher academic optimism, low parent involvement, but high parent trust. Moreover, focus group interview findings emphasized the importance of communication, trust, supportive environments; and a connection existed between academic optimism and parent involvement. The author concluded that academic optimism was a precursor to parent involvement.

Skaggs (2016) collected data from 35 high school teachers of two purposefully selected schools via survey and two principals via interviews. He/she identified that in a school where the principal included all stakeholders all through the process and instantaneously met with the staff to eliminate wrong information, invited community members and parents to answer questions and make sure that correct information was appropriately shared, teachers reported lower stress and higher academic optimism level.

Finally, Wu and Lin (2018) collected data from 1073 teachers in 102 schools in Taiwan and the findings revealed that school level accounted for a variance of 10% in teacher and school academic optimism. School academic optimism accounted for almost all of the between-school variance, overriding other school variables including student achievement and the number of minority students. Moreover, a significant positive relationship was found between teacher and school academic optimism; in the schools where both school and individual teacher academic optimism was high.

In the Turkish context, there are several studies in the literature related to school academic optimism (Biroğul, 2015; Biroğul & Deniz, 2017; Bozkurt & Ercan, 2017; Cansoy & Parlar, 2018; Çağlar, 2013; Çoban, 2010; Çoban & Demirtaş, 2011; Karaçam, 2016; Kerimgil-Çelik & Gürol, 2015; Oldaç, 2016; Özdemir & Pektaş,

2017; Yıldırım & Yılmaz, 2018; Yılmaz & Kurşun, 2015; Yılmaz, Uğuz, & Ünal, 2016; Yılmaz & Yıldırım, 2017), but very few exist at the individual-level teacher academic optimism (Erdoğan, 2013; Özdemir & Kılınç, 2014; Sezgin & Erdoğan, 2015; Uzun, 2014; Yalçın, 2013; Yıldız, 2011; Yıldız & Özer, 2012).

Although some studies reported that they examined individual-level academic optimism since they utilized the School Academic Optimism Scale (Hoy, Tarter, & Woolfolk Hoy, 2006), they were not considered in this section but cited above among the studies conducted on school academic optimism. Moreover, since the present study is interested in ensuring consistency and comparability in terms of instrumentation and research findings, the studies of Ergen (2016) and Ergen and Elma (2018) were not included in the following literature review since they developed an entirely new instrument for measuring academic optimism.

To start with the local literature, Sezgin and Erdoğan (2015) conducted bivariate correlations and path analysis to investigate the predictive value of academic optimism, hope, and zest for work on self-efficacy and perceived success. Analyzing the data coming from 600 primary school teachers. They found the significant and positive relationship between elementary teachers' academic optimism and their self-efficacy, perceived success, hope and zest for work. Additionally, academic optimism was also found to positively and directly predict teachers' perceived success. Academic optimism was found to be in a positive relationship with age and experience; that is, older and more experienced teachers reporting higher levels of academic optimism. Yalçın (2013) studied the relationship between primary school teachers' burnout, stress, resilience, and academic optimism. The researcher initially identified that teachers of 41-50 years of age reported significantly higher levels of academic optimism than 21-30 years old teachers; while experience did not make a significant difference. The results further revealed that academic optimism, perceived stress, and psychological resilience were significant predictors of burnout.

In contrast to the findings of Sezgin and Erdoğan (2015), in her study with 398 primary school teachers, Uzun (2014) did not find any significant correlation between academic optimism and the participants' age and experience levels. The author, however, identified a relationship between Schwartz's ten basic human value types (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security) under the four higher-order value groups (openness to change, self-enhancement, conservation, self-transcendence). Although academic optimism was also found to be insignificant relationship with openness to change and self-transcendence higher-order groups, as well as achievement (personal success), stimulation (excitement, novelty and challenge in life.), self-direction (independent thought and action), and benevolence (preserving and enhancing the welfare of those in personal contact), only self-direction, universalism (understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.), and benevolence were found to have a predictive power in explaining academic optimism.

Kılınç (2013) examined the relationship between the sense of academic optimism of primary school teachers ($n = 302$) and their perceptions of the school climate. Based on bivariate correlations, the researcher concluded that supportive, directive, and intimate school climates positively and significantly were related to academic optimism. Multiple regression analysis results further revealed that the intimacy element of school climate was the only significant predictor of teacher academic optimism while other dimensions did not contribute significantly. Based on this finding, in intimate school climates "characterized by positive relationships among school members in which members support each other in various matters," (p. 629) teachers felt more optimistic, i.e., they were more efficacious, placed more trust in students and parents, and exerted greater academic emphasis for student learning and achievement. Similarly, conducted with 211 primary school teachers, Özdemir and Kılınç (2014) reported that effective school structure was positively and significantly related to teachers' sense of academic optimism, explaining 21% of the variance in

this construct. Meaning, in schools where teachers are supported, respected, and seen as professionals, teachers' senses of academic optimism were higher.

As can be seen, research on academic optimism is still quite young in the literature. School academic optimism has been studied larger in number, but scarcity continues in terms of individual teacher academic optimism. As could have also been noticed, the sample of these studies continuously comprised of primary school teachers and therefore used and validated Teacher Academic Optimism Scale - Elementary Form (TAOS-E). To date, no study adapted the Secondary Form (TAOS-S) to Turkish and implemented it on secondary level teachers. With this feature, the present study is the first one to make this contribution to the literature by adapting the TAOS-S to the Turkish context.

2.5 Commitment to Teaching

Commitment has received much scholarly interest in organizational research since a range of positive consequences such as decreased employee turnover, more effort-wise investment in the job, higher performance, and greater intention to stay or leave the organization have been highlighted as the outcomes of employee commitment (Freund, 2005; Hackett, Lapierre, & Hausdorf, 2001; Kushman; 1992; Meyer & Allen, 1997; Meyer, Becker, & Vandenberghe, 2004; Ostroff, 1997; Rosenholtz, 1989a; Ware & Kitsantas, 2007; Yousef, 2000). It further is correlated with personality, self-efficacy, job satisfaction, work experience, and successful experiences (Klassen & Chiu, 2010).

Commitment in its broadest terms refers to “the existence of a psychological bond between the individual and the object of commitment, a bond that takes on a special meaning and importance to that person” (Firestone, 1996, p. 215). Commitment to teaching can, therefore, be defined as a teacher's psychological attachment to the

teaching profession (Coladarci, 1992) and is cited among the most effective paths to school success (Fink, 1992) and student achievement (Firestone, 1996).

Similar to the organizational research findings, Reyes (1989, as cited in Thien, Razak, & Ramayah, 2014) suggested that “a committed teacher is likely (a) to be more hardworking, less tardy, and less inclined to leave the workplace; (b) to devote more time to extracurricular activities to accomplish the goals of the organization; (c) to outperform; (d) to influence student achievement; (e) to believe and act upon the goals of the school; (f) to exert more efforts beyond personal interest; and (g) to intend to remain a member of the school system” (p. 2), which are also the characteristics of agent teachers. Moreover, less committed teachers are reported to make fewer plans to increase the quality of their teaching (Firestone, 1996). It has also been established that the more the level of agency and the more opportunities to practice the professional aims they have, the more committed they are to their work (Vähäsantanen et al., 2008).

2.5.1 Research on commitment to teaching. Researchers such as Billingsley and Cross (1992), Cohen (1999), and Firestone and Pennell (1993) have differentiated organizational commitment and commitment to the profession. Organizational commitment is defined as “the relative strength of an individual's identification with and involvement in a particular organization” (Mowday, Steers, & Porter 1979, p. 27), whereas professional commitment refers to the involvement of individuals in the present profession and the overall importance of work (Lodahl & Kejner, 1965). Yet interestingly, since there exists a conflict between organizational commitment and professional commitment as research has found that more committed teachers to the profession are expected to be less committed to the organization (Wallace, 1993), only teachers’ commitment to the profession has been handled for the purpose of this study and the following literature review is derived from this perspective.

Retrieving data from the National Education Longitudinal Study of 1988 database, Research conducted by Park (2005) has demonstrated that certain personal characteristics of the 7,198 teachers were among the antecedents of teacher commitment. The study revealed that gender was one of such characteristics where female teachers were found to be more likely to stay in the profession than their male counterparts. While more experienced teachers were more committed to teaching, educational level is found to be negatively related to commitment, i.e., the higher educational level of the teacher, the less committed s/he is. Moreover, student background variables as achievement level, socioeconomic status, gender, and ethnicity as well as school variables as school type (public vs. private), urbanity, and school size, and SES were found to be related to teacher commitment. Teachers at public, urban, low SES, and large schools report lower commitment to the profession. Finally, workplace conditions such as principal leadership, teachers' impact on decision-making, and professional development opportunities were also found to correlate with commitment (Park, 2005).

Apart from these structural variables, commitment to the teaching profession has been found to correlate to several other constructs. Self-efficacy beliefs have steadily been found to be positively related to teachers' commitment to teaching. A recent meta-analysis of all the research in the literature by Chesnut and Burley (2015) found a medium-sized effect of teaching self-efficacy ($r = .32$), meaning it explains nearly 10% of the variance in commitment to the teaching. The effect was higher when the research scope was limited to studies using measures that are deemed conceptually more accurate.

Commitment to teaching was further found, in the international literature, to be related significantly to teachers' intention to quit (Billingsley, 1993; Klassen & Chiu, 2011), job satisfaction (Fresko, Kfir, & Nasser, 1997; Kushman, 1992; Shukla, 2014), initial motivation to teaching (Rots, Aelterman, Devos, Vlerick, 2010), professional orientation, evaluative support of mentor teachers (Rots, Aelterman, Vlerick, &

Vermeulen, 2007), morale, school climate (Smith, 2009; Weiss, 1999), teacher classroom autonomy, faculty policymaking influence, assistance for teachers, maximum end-of-career salaries (Ingersoll, 1997), stress (Billingsley & Cross, 1992; Jepson & Forrest, 2006; Klassen & Chiu, 2011; Klassen et al., 2013), student motivation and achievement (Firestone, 1996), teacher professionalism (Smith, 2009), high expectations from students, career anxiety (Evans & Tribble, 2001; Kushman, 1992), ethics of teaching, preparation in curriculum, instruction, and assessment (Daniels, Mandzuk, Perry, & Moore, 2011), intrinsic motivation to teaching (Chan, 2006), participation in decision making, organizational citizenship (Somech & Bogler, 2002), leadership support, role conflict, role ambiguity, (Billingsley & Cross, 1992), empowerment (Bogler & Somech, 2004), experience (Rosenholtz & Simpson, 1990), ability to develop and use skills related to work (Louis, 1998), relationship satisfaction, salary satisfaction (Canrinus, Helms-Lorenz, Beijaard, Buitink, & Hofman, 2012); perceived job fit (Bogler & Nir, 2015); psychological well-being (McInerney, Ganotice, King, Morin, & Marsh, 2014), and academic optimism (Kurz, 2006; Kurz, Woolfolk Hoy, & Hoy, 2007).

Despite the outnumbering number of studies with the focus of teacher's organizational commitment, the Turkish literature, appeared to be limited in the number of research studies conducted on the 'commitment to the teaching profession' variable.

Turhan, Demirli, and Nazik (2012), collecting data from 198 primary school teachers, examined the effect of gender, age, and education level on teachers' commitment. While the authors could not identify any significant contribution of gender, participants aged 51 and above appeared to be more committed to the profession than their younger colleagues. Interestingly yet, teachers who held higher education degrees experienced higher levels of difficulty in committing to the profession than undergraduate graduates.

Ünal (2015) collected data from 587 primary and elementary school teachers working in public schools in Samsun. The results showed that the commitment of teachers differed based on the level of school and work experience. Teachers working in primary schools were observed to have a higher commitment to the profession than their counterparts working in elementary schools. Moreover, teachers with more experience were found to display more commitment than less experienced teachers.

Moreover, in their study, Kırđök and Dođanölkü (2018) investigated whether five-factor personality traits predicted teachers' commitment to the profession. Collecting data from 259 teachers working at different levels and branches, the authors found that commitment was related negatively with neuroticism while it was positively related to extroversion and openness. In total, the traits explained 22% of the variance in commitment.

Finally, in his dissertation study with 942 novice teachers, Kozikođlu (2006) found out that professional commitment significantly predicted the difficulties the teachers face in their professional practices although commitment to students and devotion sub-dimensions did not contribute to explained variance in this respect.

2.6 Personality Traits of Teachers

Personality is a vague and multifaceted concept (Patrick, 2011). It mirrors reliable behaviors that are thought to be less affected by context (Klassen & Tze, 2014). It is known that personality has an effect on how people react to the environment (van der Linden, Beckers, & Taris, 2007). Given the same situation, some people can react more to that condition than others (Gable, Reis, & Elliot, 2000), as in the individual factors affecting teachers' agency.

Personality has long been found to be associated with work performance inside and outside of educational areas (Klassen & Tze, 2014). Albeit the rise and fall reached

in the mid-20s in personality traits research, with the new advancements in personality theories like the emergence of Big Five and Myers-Briggs Type Inventory, the field happened to gain increased attention again (Murphy & Dzieweczynski, 2005).

There are several personality theories long established in the literature. This study utilized the Five-Factor Model (FFM) where the personality is measured by individuals' neuroticism, extraversion, openness, agreeableness, and conscientiousness (McCrae & Costa, 1999). Since personality is an individual factor, it is essential to define what personality is meant by the FFM theorists. As the representation in Figure 2.3 indicates, personality is theorized to be composed of basic tendencies, characteristic adaptations, and self-concept. The elliptical parts represent the facets of personality, i.e., biological bases, external influences, and objective biography.

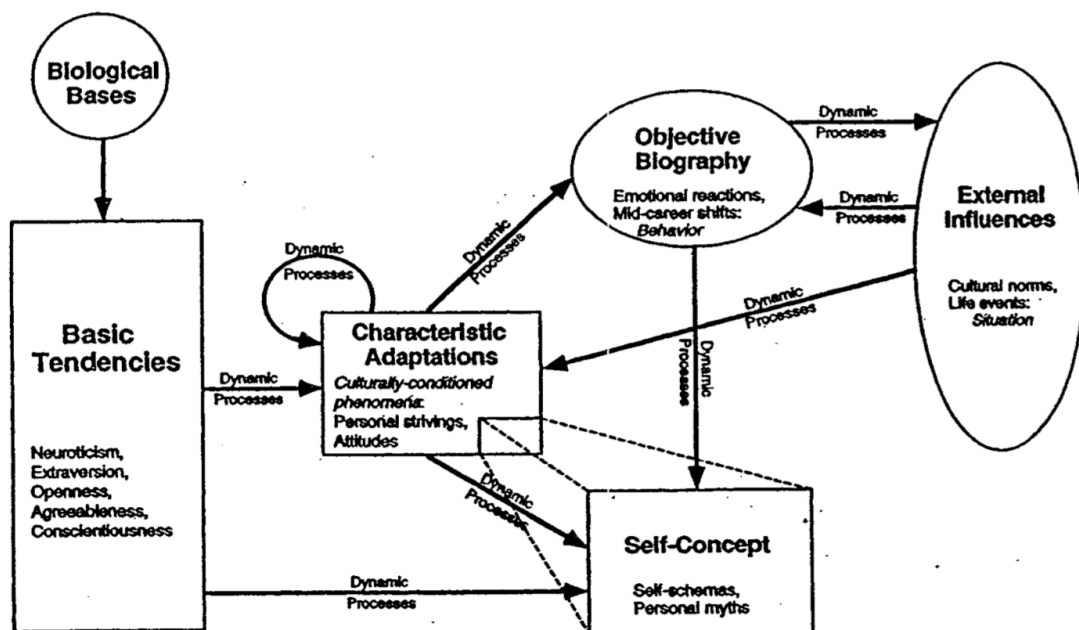


Figure 2.3. Personality trait structure as human universal (McCrae & Costa, 1997).

Basic tendencies, which are the focus in this study, are suggested to be the central ingredients of personality capacities, and they have inferred dispositions rather than observed. Basic tendencies determine the individual's potential and direction (McCrae & Costa, 1996). Despite its central role in people's lives, research on the personality traits of teachers and their job performance remained limited (Klassen & Tze, 2014). This study thus attempts at bridging this gap.

2.6.1 Research on personality traits of teachers. There exists several scholarly research studies conducted. Review of research by Barr (1952) demonstrated that teachers' attitudes and personality traits had predictive power in teaching success. Considering the accrued number of research conducted, Klassen & Tze (2014), in their meta-analysis of 43 research studies, tried to identify the link between teacher psychological domains (personality and self-efficacy) and teaching effectiveness (teaching performance and student achievement) as well as measure the moderation of the type of teachers' psychological characteristics and teaching effectiveness. The effect of teachers' psychological characteristics on their teaching effectiveness was significant with small effect. Furthermore, both sense of self-efficacy for teaching and personality traits separately were linked to teacher effectiveness significantly with again small effect. The relationship between teaching efficacy and personality traits, on the other hand, were found to be non-significant. In contrast, Mojsa-Kaja, Golonka, and Marek (2015) found that teaching efficacy was determined by personality factors.

Apart from teacher effectiveness research, the construct has been significantly associated with several other variables as teacher burnout (Kokkinos, 2007; Mojsa-Kaja et al., 2015), teaching ability (Dodge, 1943; Murray, 1975), stress level (Fontana & Abouserie, 1993), level of knowledge, fairness, utilization of objectives and testing, and flexibility in instruction (Clayson & Haley, 1990; Marks, 2000; Philips, Carlisle, Hautala, & Larson, 1985), student evaluation of instruction (Clayson & Sheffet, 2006; Hart & Driver, 1978; Murray, Rushton, & Paunonen, 1990; Patrick, 2011), learner

satisfaction (Yarbrough & Madsen, 1998), work engagement (Zaidi, Wajid, Zaidi, Zaidi, & Zaidi, 2013), and teaching styles (Zhang, 2007).

The Turkish literature has had its fair share in terms of teachers' personality traits research, as well. The construct has been handled in many diverse ways and has been found to be in relation to job satisfaction (Çevik-Kılıç, 2017), organizational citizenship behavior (Yücel & Kaynak, 2008; Kaynak, 2007), job performance (Saltukoğlu & Tatar, 2018), job satisfaction (Mete, 2006), burnout (Kaptangil & Erenler, 2014), student affection and academic achievement of students (Eryılmaz, 2014), proactive behaviors (Halıcı-Karabatak, 2018), attitude towards teaching profession (Şenel, Demir, Sertelin, Kılıçaslan, & Köksal, 2004), school climate (Saygılı, 2010), organizational commitment (Yılmaz-Koca, 2009), and school academic optimism (Gökler & Taştan, 2018).

Since it is directly related to one of the constructs of this dissertation, Gökler and Taştan's (2018) study was investigated in detail. The authors, in their study with 400 high school teachers, found out that all dimensions of the Big Five personality traits indicator were significantly correlated with school academic optimism, explaining 16% of the variance in the construct. Moreover, teachers who reported themselves to be extroverted placed more importance in terms of academic emphasis dimension of school academic optimism while emotional stability was related more to trust in students and parents sub-scale.

2.7 Summary of the Literature

Today's society is changing rapidly and necessitates that teachers are capable and enthusiastic about dealing with various challenges; they need to be agents who can work individually and cooperatively (van der Heijden, Geldens, Beijaard, & Popeijus, 2015). The studies outlined thus far put forward that teacher agency constituted of the abilities, belief systems, self-regulatory capacities via which personal influences are

employed (Hadar & Banish-Weisman, 2019). While teacher agency is regarded to be time-bound and contextual (Lipponen & Kumpulainen, 2011), it has also been argued to be composed of personal or inner factors (Pantić, 2017).

The literature strongly indicated that more research needs to be done to identify different facets of agency and suggested that little is known about the personal characteristics that might explain the actions of teachers employing a professional agency (Bakkenes, Vermunt, & Wubbels, 2010). Most research, however, focused on the social context and neglected the teacher-persona involved in the agentic actions of teachers. Albeit the importance of explaining phenomena with large sets of data, the vast majority of the studies on teacher agency have been conducted qualitatively, and only a little research employed qualitative methods (Hadar & Banish-Weisman, 2019).

The literature revealed that teachers' capabilities and thrusts act as individual factors or sources for context-based facets and they encourage the actualization of work-related teacher agency. It, moreover, is of importance to take into consideration of how individual perceptions and capacities relate to the realization of the agency. In this sense, the present study adds to the extant body of research on the agency by emphasizing the role of personal values and characteristics. Figure 2.4 represents the hypothesized model of this study investigating a set of individual variables playing a role on teacher agency.

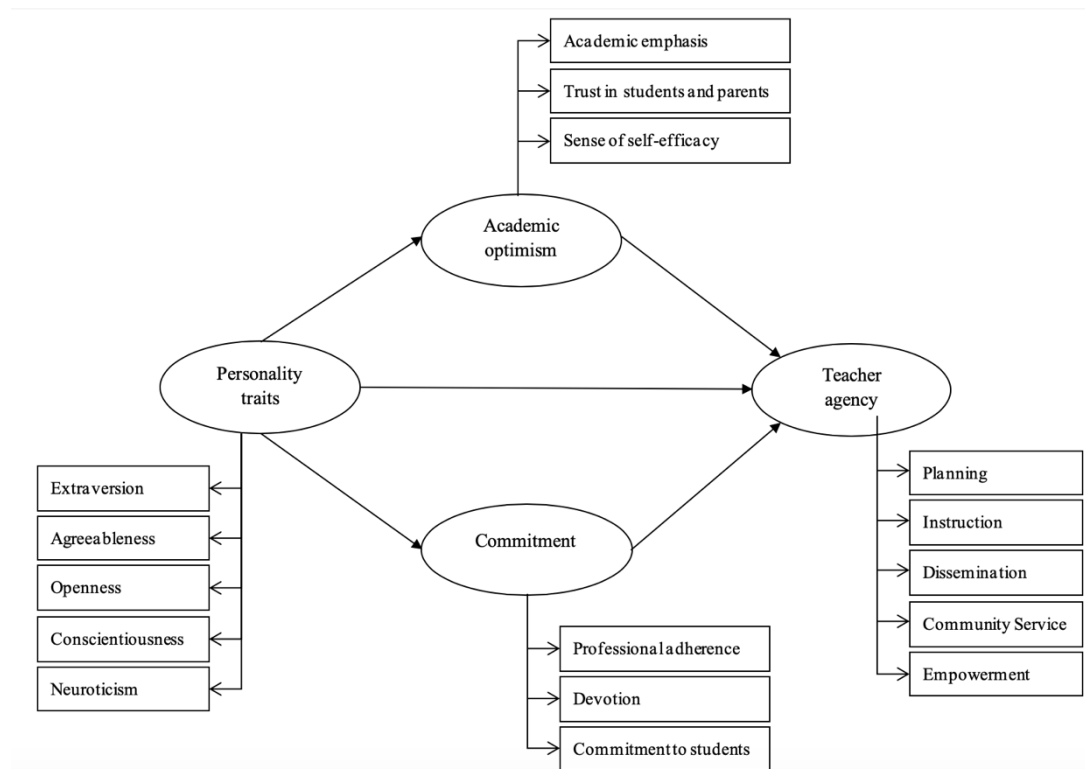


Figure 2.4. The model portraying the relationships between teacher agency, and personality traits, academic optimism, and commitment to teaching.

CHAPTER 3

METHOD

This chapter introduces the methodological approaches adopted by the present study. It hosts sections that describe the research design, sampling procedures, instrumentation, data collection and analysis, and finally the limitations of this research.

3.1 Research Design

The purpose of this study was to model the relationship among factors that relate to teacher agency. The particular variables under scrutiny were teachers' personality traits, levels of academic optimism, and their commitment to teaching.

Therefore, this study was shaped as correlational research which attempts to describe and measure the degree of association between two or more variables (Creswell, 2012). The investigators who wish to conduct correlational studies examine a number of variables they believe are related to a more complex variable (Fraenkel, Wallen & Hyun, 2012). With the help of correlational design, while variables with significant contributions can serve to generate inspiration for supplementary research when non-significant or slightly correlated predictors are identified, they can be examined carefully for further consideration (Fraenkel et al., 2012). To assess the set of correlations investigated in this study, Structural Equation Modeling (SEM) was used.

3.2 Research Questions

This study aimed at addressing the following research question: “To what extent is teacher agency predicted by the model including direct and indirect effects of personality traits, academic optimism, and commitment to teaching?” The hypothesized model is presented in Figure 3.1.

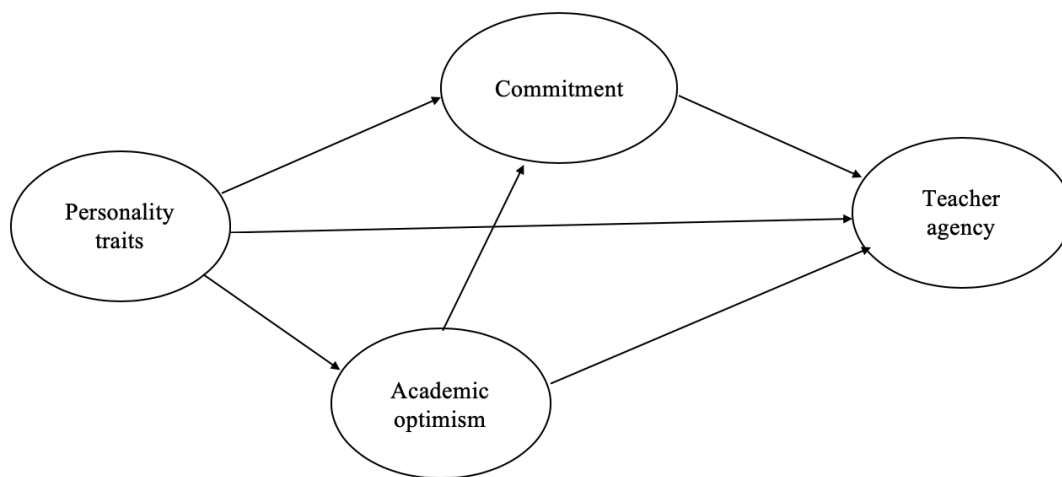


Figure 3.1. The proposed structural equation model for teacher agency and correlating factors.

3.3 Samples of the Study

The first section presents the characteristics of the pilot sample, while the second section presents the sample characteristics of the main study.

3.3.1 Sample of the pilot study. The pilot study sample comprised of in-service teachers working in public and private schools in Ankara. Due to feasibility restrictions, a convenient sampling procedure was employed. Data were collected by contacting teachers face to face in the schools. A total number of 200 teachers were accessed in the data collection process. Table 3.1 offers characteristics of the participants.

Of the respondents, 136 were female (70%) and 58 were male (30%). While 99 participants (49.5%) worked in public schools, 101 of them (50.5%) worked in private schools. Moreover, 58 of the respondents (32%) taught language courses, 32 of the respondents (19%) taught social sciences courses, 56 (31%) taught math and science courses. Additionally, 22 of them (12%) taught fine arts courses and 11 (6%) were teachers of vocational courses. Furthermore, 101 teachers (52%) were graduates of faculties of education, 92 of them (48%) followed other tracks to obtain a teaching degree. In terms of higher education, while 125 of the participants (64.8%) had an undergraduate degree, 65 of them (33.7%) pursued higher education and completed master's studies as three (1.5%) of them held a Ph.D. degree. While 128 of the participants (65%) hold the knowledge of at least one foreign language, 69 (35%) could not read, write or speak in another language. In the sample, teachers held an average of approximately 14 years of teaching experience ($SD = 7.90$) and worked with 195 students ($SD = 173.3$) and taught 30 hours ($SD = 44.72$) per week.

Table 3.1

Characteristics of the Participants of the Pilot Study (n = 200)

Variable	<i>f</i>	%	<i>M (SD)</i>
Gender			
Female	136	70	
Male	58	30	
Missing	6		
School type			
Public	99	50	
Private	101	50	
Missing	0		
Branch			
Language arts	58	32	
Social sciences	32	19	
Math and Science	56	31	
Fine Arts	22	12	
Vocational	11	6	
Missing	21		
Faculty graduated			
Faculty of Education	101	52	
Other	92	48	
Missing	7		

Table 3.1 (Continued)

Variable	<i>f</i>	%	<i>M (SD)</i>
Higher education			
None	125	65	
M.Sc.	65	34	
Ph.D.	3	1	
<i>Missing</i>	7		
Foreign language			
None	69	35	
1 or more	128	65	
<i>Missing</i>	3		
Total number of students			195.09 (173.34)
Total number of teaching hours			29.77 (44.72)
Years of teaching experience			13.91 (7.90)

3.3.2 Sample of the main study. The main study sample comprised of in-service teachers working in public schools in selected districts of Ankara. A total number of 577 teachers from randomly selected schools in the districts of Altındağ, Beypazarı, Çankaya, Etimesgut, Gölbaşı, Haymana, Keçiören, Mamak, Polatlı, Pursaklar, Sincan, and Yenimahalle participated in the study. Table 3.2 presents the characteristics of the participants in the main study.

Table 3.2

Characteristics of the Participants of the Main Study (n = 577)

Variable	<i>f</i>	%	<i>M (SD)</i>
Gender			
Female	423	74	
Male	146	26	
<i>Missing</i>	8		
School level			
Secondary	249	44	
High	312	56	
<i>Missing</i>	16		
Branch			
Language arts	127	28	
Social Sciences	67	15	
Math and Science	134	30	
Fine Arts	76	17	
Vocational	48	10	
<i>Missing</i>	125		

Table 3.2 (Continued)

Variable	<i>f</i>	%	<i>M (SD)</i>
Faculty graduated			
Faculty of Education	343	60	
Other	225	40	
Missing	9		
Education level			
None	385	74	
M.Sc.	117	24	
Ph.D.	10	0.2	
Missing	65		
Foreign language			
None	152	29	
1 or more	375	71	
Missing	30		
Total number of students			171.56 (173.29)
Total number of teaching hours			22.67 (11.53)
Years of teaching experience			17.06 (10.60)

Of the respondents, 423 were female (74%) and 146 were male (26%). All of the participants worked in public schools. Moreover, 127 of the respondents (28%) taught language courses, 67 of the respondents (15%) taught social sciences courses, 134 (30%) taught math and science courses. Additionally, 76 of them (17%) taught fine arts courses and 48 (10%) were teachers of vocational courses. Furthermore, 343 teachers (60%) were graduates of faculties of education, 225 of them (40%) followed other tracks to obtain a teaching degree. In terms of higher education, while 385 of the participants (74%) had an undergraduate degree, 117 of them (24%) pursued higher education and completed master's studies as 10 (0.2%) of them held a Ph.D. degree. While 375 of the participants (71%) hold the knowledge of at least one foreign language, 152 (29%) could not read, write or speak in another language. In the sample, teachers held an average of approximately 172 years of experience ($SD = 173.29$) and work with 23 students ($SD = 11.5$) for 17 hours ($SD = 10.6$) per week.

3.4 Data Collection Instruments

The following section addresses the scales employed in this study in detail.

3.4.1 Demographic information form. The first section of the data collection instrument consisted of items asking participants to give information about themselves and their working environment. All variables were self-reported. Table 3.3 presents the variables with answer categories and scale of measurement.

Table 3.3

Summary of Demographic Information Form

Variable	Categories	Level of measurement
Gender	(1) Female (2) Male	Nominal
School level	(1) Secondary (2) High school	Nominal
Faculty graduated	(1) Faculty of education (2) Other	Nominal
Branch	Asked in an open-ended format	
Highest earned degree	(1) Bachelor degree (2) Master degree (3) Doctorate degree	Ordinal
Teaching experience	Reported in years	Ratio
Foreign language knowledge	(0) None (1) One or more	Nominal
Total number of students	Reported in numbers	Ratio
Total number of teaching hours	Reported in hours	Ratio
Level of student success	(1) Very low (2) Low (3) Medium (4) High (5) Very high	Interval
Level of student motivation	(1) Very low (2) Low (3) Medium (4) High (5) Very high	Interval
The frequency of discipline problems	(1) Very low (2) Low (3) Medium (4) High (5) Very high	Interval

3.4.2 Teacher Agency Scale. This scale was developed for the purpose of the present study to measure teacher agency and included items that relate to a number of agentic behaviors of teachers. Teacher agency is defined as “a capacity that prepares the way for the intentional and responsible management of new learning, at both an individual level and community level” (Pyhältö et al., 2011, p.100). The rationale behind the development of this unique tool was the inexistence of such an instrument as the concept of teacher agency has only been recently explored. The scale was designed on a 5-point rating scale with the following anchors: 1: Never, 2: Seldom, 3: Sometimes, 4: Often, and 5: Always. Teacher Agency Scale aimed at identifying teachers’ agentic behaviors within the context of teaching, in and out of their classrooms. It particularly intended to measure the extent to which teachers took the steps to further and enhance their teacher practice, also known as *going the extra mile*.

Based on relevant agency literature and teacher qualifications proposed by the Turkish Ministry of National Education, an item pool composing of 44 items was generated. After the consulting four field experts, the language and more importantly the content and sub-scale classification, of the 44 items, seven were omitted and 11 items were revised. For instance, “Öğretme/ öğrenme süreçlerinde kullanılabilecek bilimsel araştırmaları inceler ve sonuçlarını uygulamalarımda kullanırım.” [I investigate scientific research that can be utilized in teaching/learning processes and use their results in my practices.] was modified as “Öğretme/ öğrenme süreçlerinde bilimsel araştırma sonuçlarını kullanırım.” [I utilize the results of scientific research in teaching/learning processes.] since the initial version included two different courses of action. After these modifications, the final version of the scale was reduced to 37 items under six sub-scales and they were categorized as: (1) Planning, (2) Instruction, (3) Evaluation of students, (4) Self-evaluation of teachers, (5) Community service, and (6) Dissemination.

The *Planning* items underline the actions teacher engage in to individualize the activities of planning based on the needs of the students using a variety of tools and support. The *Instruction* dimension includes teacher behaviors as the integration of school and out of school learning, fostering students' development through supporting them to engage in scientific projects and dissemination of them, and using scientific research results in teaching/learning processes. The subscale, *Evaluation of Students*, refers to the diverse and authentic implementations of teachers in assessing their students' learning, while the *Self-evaluation of Teachers* subscale is related to teachers' evaluation of their teaching using other stakeholders' and their own reflections. Yet, the *Community Service* subscale includes activities as organizing various parent involvement and acculturation activities, whereas the *Dissemination* subscale includes the teachers' endeavors to share their authentic works with their colleagues, other schools, ministry, and other external stakeholders. Sample items from each sub-scale are provided in Table 3.4.

Table 3.4

Sample Items for Each Subscale

Subscale	Sample items
Planning	“I develop authentic annual and daily plans based on the needs of students.” [Öğrencilerin ihtiyaçlarını göz önünde bulundurarak özgün yıllık ve günlük planlar geliştiririm.]
Instructional activities	“I utilize scientific research results in learning/teaching processes.” [Öğretme/öğrenme süreçlerinde bilimsel araştırma sonuçlarını kullanırım.]
Evaluation of students	“I make sure that students make self-evaluations of their learning.” [Öğrencilerin öğrenmeleriyle ilgili öz-değerlendirme yapmalarını sağlarım.]
Self-evaluation of teachers	“I make long- and short-term plans based on my self-evaluation results.” [Kişisel değerlendirme sonuçlarıma dayanarak öğretimim hakkında uzun ve kısa vadeli planlar yaparım.]
Community service	“I organize events for parents to participate in several social, cultural, and art activities.” [Ailelerin çeşitli sosyal, kültürel, sanatsal etkinliklere katılımı için organizasyonlar düzenlerim.]

Table 3.4 (Continued)

Subscale	Sample items
Dissemination	“I share my authentic works with external stakeholders (other schools, Ministry of National Education, public education centers, etc.)” [Özgün çalışmalarımı dış paydaşlarla (diğer okullar, MEB, halk eğitim merkezleri gibi) paylaşıyorum.]

3.4.2.1 Validity and reliability of the Teacher Agency Scale. The factor structure of the Teacher Agency Scale was initially examined through Exploratory Factor Analysis (EFA) with the pilot data and then through the Confirmatory Factor Analysis (CFA) using the main study data.

3.4.2.1.1 Exploratory Factor Analysis of the Teacher Agency Scale. An EFA was used to identify the underlying factor structure of the 37-item Teacher Agency Scale. Six factors were extracted through Principal Axis Factoring, as Mardia’s test of multivariate normality was violated ($b_2p(14.11) = 1557.56, p < .05$). Additionally, Direct Oblimin Rotation was used. The assumptions of Kaiser-Meyer-Olkin’s measure of the adequacy of the sample size with a value of .89 and Bartlett’s test of sphericity ($X^2(666) = 2995.54, p < .05$) were satisfied, proving that the scale has a latent factor structure. With scores above .32 (Tabachnick & Fidell, 2012), the correlation matrix also provided evidence for the existence of a factor structure. Checking the total variance explained (Table 3.5), results have shown that six factors explained 55.35% of the variance in the Teacher Agency latent variable. The result of the Scree test also supported this finding and can be seen in Figure 3.2.

Table 3.5

Eigenvalues, Percentages of Variance, and Cumulative Percentages for Factors of the Teacher Agency Scale

Factor	Eigenvalue	% of variance	Cumulative %
Factor 1	11.24	30.38	30.38
Factor 2	2.85	7.70	38.08
Factor 3	1.88	5.09	43.17
Factor 4	1.64	4.44	47.61
Factor 5	1.55	4.02	51.82
Factor 6	1.31	3.53	55.35

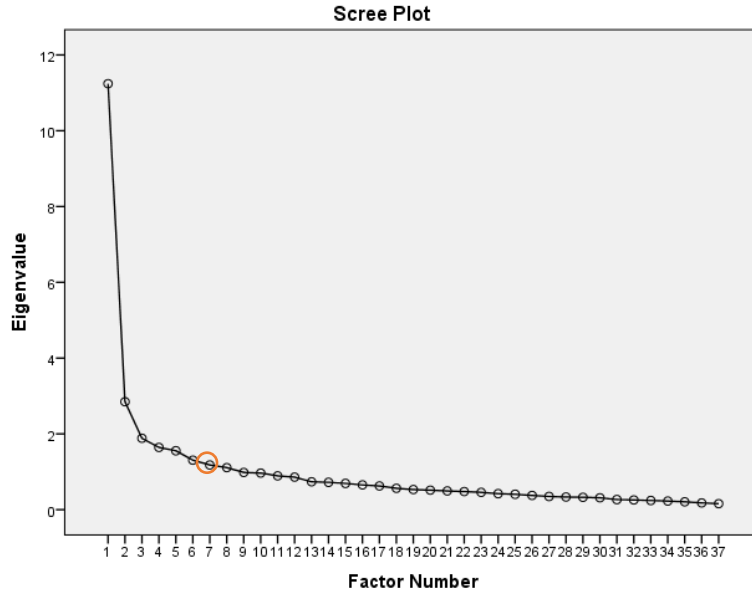


Figure 3.2. Scree test for Teacher Agency Scale dimensions.

Table 3.6 presents the pattern matrix, showing factor loadings of each item. Factorial structure emerged to be different from the preplanned version. More specifically, two factors “Evaluation of Students” and “Self-evaluation of teachers” merged as one factor; while a new factor (including items 2, 16, 17, 20, 28) appeared. Considering the content, the factor was named “empowerment.” It was also seen that six of the items did not load properly to the factors they were planned to load to and omission of them would hinder content validity; thus, they were decided to be modified for the main study. These items were 2, 4, 19, 22, 27, and 19. To illustrate, “Özel ihtiyacı olan öğrencilerim için bireysel çalışma programları oluşturum.” [I develop individual study programs for my students with special needs.] was modified as “Özel ihtiyacı olan öğrencilerim için uzmanlarla birlikte bireysel eğitim programları planlarım.” [I plan individual education programs with experts for my students with special needs]. Furthermore, considering the number of items in each factor, items 15, 17 and 21 were decided to be omitted from the scale. For example, item 24 was: “Ölçme sonuçlarını değerlendirerek öğrencilere gelişimleri ile ilgili geri bildirim veririm.” [I evaluate the assessment results and give feedback to students about their progress.] This item was evaluated as easy to be endorsed than the other items in the scale.

Table 3.6

Factor Loadings for the Teacher Agency Scale

	Cronbach alpha	Alpha if item deleted	Item-total correlation
Instruction	.89		
Item 6		.89	.58
Item 7		.88	.66
Item 8		.88	.64
Item 9		.89	.54
Item 10		.88	.62
Item 11		.88	.66
Item 12		.88	.66
Item 13		.88	.68
Item 14		.88	.63
Item 16		.88	.71
Community service	.85		
Item 26		.81	.78
Item 27		.80	.80
Item 28		.83	.74
Item 29		.89	.58
Evaluation	.77		
Item 19		.87	.69
Item 20		.86	.76
Item 21		.86	.74
Item 22		.88	.65
Item 23		.87	.72
Item 24		.87	.68
Planning	.79		
Item 1		.75	.59
Item 2		.71	.66
Item 3		.70	.69
Item 4		.80	.49
Dissemination	.84		
Item 5		.84	.51
Item 30		.80	.69
Item 31		.82	.60
Item 32		.81	.64
Item 33		.82	.61
Item 34		.80	.68
Empowerment	.70		
Item 15		.80	.60
Item 17		.75	.70
Item 18		.76	.68
Item 25		.79	.62

Thus, after the pilot study, the new sub-scales were named as (1) Instruction, (2) Community service, (3) Evaluation, (4) Planning, (5) Dissemination, and (6)

Empowerment. The definitions remained same, except “evaluation” and “empowerment” subscales. The new subscale “empowerment” was defined as “related to the engaging students in planning, instructional and evaluation activities,” while “evaluation” refers to “the diverse and authentic implementations of teachers in assessing their students’ learning as wells as their teaching using other stakeholders’ and their own reflections.”

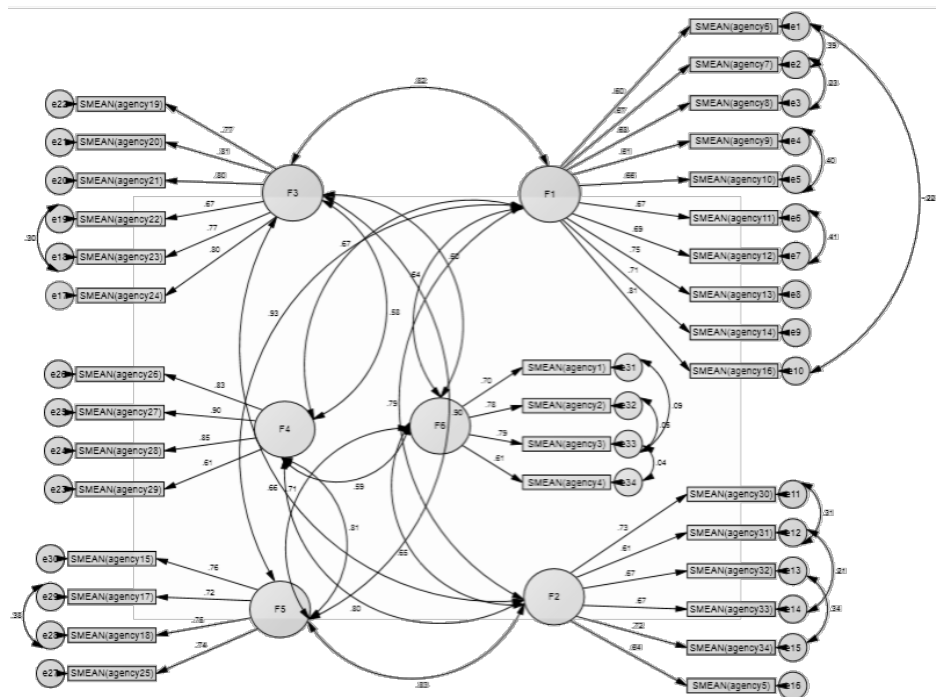
3.4.2.1.2 Confirmatory Factor Analysis of the Teacher Agency Scale. A Confirmatory Factor Analysis was conducted to validate the factor structure of the Teacher Agency Scale. Several fit statistics were examined to assess the fit between the hypothesized model and sample data based on cut off values recommended by the literature. The following criteria were employed to judge the goodness of fit indices (Table 3.7).

Table 3.7

Criteria Employed for Goodness-of-Fit Indices

Fit index	Rule of thumb	Reference
TLI	> .90	Hair, Anderson, Tatham, Black. (1998)
CFI	> .90	Hu & Bentler (1999)
RMSEA	< .08	MacCallum (1992)
SRMR	< .08	Hu & Bentler (1999)

Since the initial attempt did not produce an acceptable model fit ($X^2/df = 4.92$, $p = .00$, $TLI = .83$, $CFI = .85$, $SRMR = .064$, and $RMSEA = .082$), modification indices were checked and error covariances of ten items higher than a value of 23 were freely estimated. Following these modifications, results of the CFA showed that all items in the re-specified model loaded significantly to the respective factors with loadings ranging from .60 to .90. Figure 3.3 presents the model. The model's fit indices indicated moderate fit with $X^2/df = 3.85$, $p = .00$, $TLI = .88$, $CFI = .89$, $SRMR = .059$, and $RMSEA = .070$.



F1: Instruction, F2: Dissemination, F3: Evaluation, F4: Community service,
F5: Empowerment, F6: Planning

($X^2/df = 3.85$, $p = .00$, $TLI = .88$, $CFI = .89$, $SRMR = .059$, and $RMSEA = .070$)

Figure 3.3. The CFA model of the Teacher Agency Scale.

In addition, to ensure clarity, the standardized estimates were also presented in Table 3.8.

Table 3.8

Standardized Regression Weights of the Teacher Agency Scale Factors

	Estimate	<i>p</i>
agency6 ← Instruction	.60	.00
agency7 ← Instruction	.67	.00
agency8 ← Instruction	.68	.00
agency9 ← Instruction	.61	.00
agency10 ← Instruction	.66	.00
agency11 ← Instruction	.67	.00
agency12 ← Instruction	.69	.00
agency13 ← Instruction	.75	.00
agency14 ← Instruction	.72	.00
agency16 ← Instruction	.81	.00
agency30 ← Dissemination	.73	.00
agency31 ← Dissemination	.61	.00
agency32 ← Dissemination	.67	.00
agency33 ← Dissemination	.67	.00
agency34 ← Dissemination	.72	.00
agency5 ← Dissemination	.64	.00
agency24 ← Evaluation	.80	.00
agency23 ← Evaluation	.77	.00
agency22 ← Evaluation	.67	.00
agency21 ← Evaluation	.80	.00
agency20 ← Evaluation	.81	.00
agency19 ← Evaluation	.77	.00
agency29 ← Community service	.61	.00
agency28 ← Community service	.85	.00
agency27 ← Community service	.90	.00
agency26 ← Community service	.83	.00
agency25 ← Empowerment	.74	.00
agency18 ← Empowerment	.75	.00
agency17 ← Empowerment	.72	.00
agency15 ← Empowerment	.76	.00
agency1 ← Planning	.70	.00
agency2 ← Planning	.78	.00
agency3 ← Planning	.79	.00
agency4 ← Planning	.61	.00

Cronbach alpha coefficients were also estimated for each subscale. Table 3.9 presents the alphas along with “alpha if item deleted” and “item-total correlation.” Alpha coefficients ranged between .70 and .89 and deemed satisfactory. In addition, item-

total correlations (ranging from .54 to .71 for “instruction”, from .58 to .80 for “community service”, from .65 to .76 for “evaluation”, from .49 to .69 for “planning”, from .51 to .69 for “dissemination”, and from .60 to .70 for “empowerment”) indicate that the items were strongly correlated with the total scale.

Table 3.9

Cronbach Alpha Coefficients, Item-total Correlations, and Alpha if Item Deleted Values

Factors	Cronbach alpha	Alpha if item deleted	Item-total correlation
Instruction	.89		
Item 6		.89	.58
Item 7		.88	.66
Item 8		.88	.64
Item 9		.89	.54
Item 10		.88	.62
Item 11		.88	.66
Item 12		.88	.66
Item 13		.88	.68
Item 14		.88	.63
Item 16		.88	.71
Community service	.85		
Item 26		.81	.78
Item 27		.80	.80
Item 28		.83	.74
Item 29		.89	.58
Evaluation	.77		
Item 19		.87	.69
Item 20		.86	.76
Item 21		.86	.74
Item 22		.88	.65
Item 23		.87	.72
Item 24		.87	.68
Planning	.79		
Item 1		.75	.59
Item 2		.71	.66
Item 3		.70	.69
Item 4		.80	.49

Table 3.9 (Continued)

Factors	Cronbach alpha	Alpha if item deleted	Item-total correlation
Dissemination	.84		
Item 5		.84	.51
Item 30		.80	.69
Item 31		.82	.60
Item 32		.81	.64
Item 33		.82	.61
Item 34		.80	.68
Empowerment	.70		
Item 15		.80	.60
Item 17		.75	.70
Item 18		.76	.68
Item 25		.79	.62

3.4.3 Ten-Item Personality Inventory (TIPI). Proposed by Gosling, Rentfrow, and Swann (2003), the Ten-Item Personality Inventory assesses big five personality traits: *openness to experiences*, *agreeableness*, *conscientiousness*, *emotional stability*, and *extraversion*. The description of each trait is provided as the following:

Openness to experiences, that is, curious, reflective, creative, deep, open-minded, NOT conventional; agreeableness, that is, trusting, generous, sympathetic, cooperative, not aggressive, or cold; conscientiousness, that is, hardworking, responsible, self-disciplined, thorough; not careless, or impulsive; emotional stability, that is, relaxed, self-confident, not anxious, moody, easily upset, or easily stressed; and extraversion, that is, sociable, assertive, talkative, active; not reserved, or shy. (Gosling et al., 2003, p. 508).

TIPI measures the extent to which participants see themselves on a scale of seven ranging from Strongly disagree (1) to Strongly agree (7). Five of the items (2, 4, 6, 8, and 10) were reversely scored. There are two items in each dimension. Items 1 and 6R measure Extraversion, items 2R and 7 measure Agreeableness, items 3 and 8R measure Conscientiousness, items 4R and 9 measure Emotional Stability, and items 5 and 10 R measure Openness to Experiences.

As Kline (2005) suggests, it is not recommended to conduct CFA with less than three indicators per latent variable. Therefore, Gosling et al. (2003) did not perform CFA

but reported Cronbach alpha coefficients for each dimension. They were .68, .40, .50, .73, and .45 for the Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience scales, respectively. Given the low-reliability scores of the two-item personality indicators, the authors provided test-retest reliabilities which ranged from .62 to .77, proving that the scale measured personality traits reliably. Moreover, the discriminant and convergent validity were assessed with a sample of 1813 undergraduate students using the Big Five Instrument (BFI) and the 10-item measure. In order to compare the pattern of external correlates of the TIPI with that of external correlates of the BFI, a battery of other measures such as the Brief Loquaciousness and Interpersonal Responsiveness Test (BLIRT; Swann & Rentfrow, 2001), the Social Dominance Orientation questionnaire (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994), the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), the Beck Depression Inventory (BDI; Beck, 1972), the Math Identification Questionnaire (MIQ; Brown & Josephs, 1999), the Short Test of Music Preferences (STOMP; Rentfrow & Gosling, 2003), and single-item measures of political values, physical attractiveness, wealth, athletic ability, and intelligence were used. (See Gosling et al., 2003, p. 516). The results showed that TIPI showed convergences comparable to the other inventories (mean $r = .77$). The test-retest reliability for the TIPI was further found to be sufficient (mean $r = .72$). Patterns of the external correlate with the loquaciousness and interpersonal responsiveness, social dominance, self-esteem, depression, music preferences, political values, physical attractiveness, wealth, athletic ability, and intelligence were examined and it was found that all column-vector correlations exceeded .90. Therefore, TIPI can be concluded that it can be used as an apt instrument to measure personality traits. In his adaptation study, Atak (2012) reported higher Cronbach Alfa coefficients as .86, .81, .84, .83, and .83 for the Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience scales. In the present study, the overall reliability of the scale was found to be .71 using the main study data.

3.4.4 Teacher Academic Optimism Scale for Secondary Teachers (TAOS-S). Developed by Fahy et al. (2010), Teacher Academic Optimism Scale for Secondary Teachers (TAOS-S) measures self-efficacy, trust in parents and students, and academic emphasis with nine items. As the authors suggest, academic optimism is composed on the basis that self-efficacy is a cognitive asset and an individual belief or expectation and trust is an *affective* response. Moreover, the academic emphasis is behavioral and, it has a focus on learning and a press for particular behaviors in schools. Therefore, academic optimism is regarded as a triadic set of connections with each element dependent on one another. The Cronbach alpha coefficients reported by Fahy et al. (2010) for the sub-scales were as follows: $\alpha_{\text{self-efficacy}} = .85$, $\alpha_{\text{trust}} = .87$, $\alpha_{\text{academic emphasis}} = .83$. Sample items and rating scales are provided in Table 3.10.

Table 3.10

Sample Items and Rating Scales of the Teacher Academic Optimism Scale

Construct	Sample item	Rating scale
<i>Self-efficacy</i>	“How much can you do motivate my students who show low interest in school work?” [Derslere az ilgi gösteren öğrencileri motive etmeyi ne kadar sağlayabilirsiniz?]	9-point rating scale (1: Nothing; 9: A great deal)
<i>Trust in students and parents</i>	“I trust my students.” [Öğrencilerime güvenirim.]	5-point rating scale (1: Never; 5: Always)
<i>Academic emphasis</i>	“I give my students challenging work.” [Öğrencilerime yüksek ancak erişilebilir hedefler koyarım.]	5-point rating scale (1: Never; 5: Always)

For the Teacher’s Sense of Efficacy sub-scale, the adaptation by Çapa, Çakıroğlu, and Sarıkaya (2005) was used for the three items selected by Fahy et al. (2010). There existed different adaptation studies of the Trust in Students and Parents and Academic Emphasis sub-scales. In this respect, there were three adaptation studies for the Teacher Academic Optimism Scale for Elementary Teachers (TAOS-E) in Turkish (Erdoğan, 2013; Yalçın, 2012; Yıldız (2011). However, there existed no adaptations

of TAOS-S; therefore, the researcher adapted the scale to Turkish. The following section addresses the adaptation process of the TAOS-S.

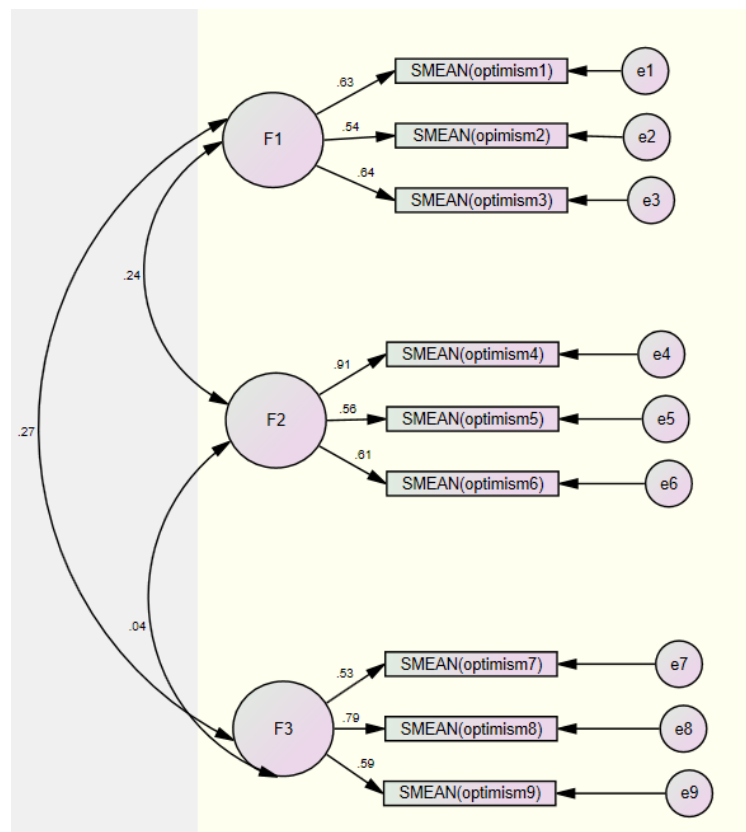
3.4.4.1 Validity and Reliability of the Teacher Academic Optimism Scale for Secondary Teachers. Within the scope of this study, Teacher Academic Optimism Scale – Secondary Teacher form (TAOS-S) scale was adapted to the Turkish context. The self-efficacy dimension of the scale was adapted to Turkish by Çapa, Çakıroğlu and Sarıkaya (2005); therefore, their translations were used for the first three items of the TAOS-S. For the trust and academic emphasis items, initially two experts in the field of education translated them from English to Turkish. After the translation process, the items that best represented the original items were selected. Selected items were then back translated to English by two experts who are fluent in Turkish and English to ensure equivalency. Finally, the scale was reviewed by two experts in the field of educational sciences to receive feedback on the clarity of the items. With their feedback, the items were finalized for pilot testing. The only problem was experienced with the item “I give my students challenging work.” As there is no direct translation of the word “challenging” in Turkish, it was translated as “work that requires them to show effort”. The factor structure of the Teacher Academic Optimism Scale was tested twice through Confirmatory Factor Analysis (CFA) with the pilot data and the main study data.

3.4.4.1.1 Confirmatory Factor Analysis with the Pilot Data. Using the pilot study data, a CFA was conducted to test the factor structure of the Academic Optimism Scale - Secondary. The model produced moderate fit with the indices of $\chi^2/df = 1.85$, $p = .00$, GFI = .96, CFI = .94, SRMR = .06, and RMSEA = .066. All items loaded significantly to the respective factors with loadings ranging from .53 to .91 (Figure 3.3) as can be seen in Table 3.11. Cronbach alpha coefficients were found to be .61 for Sense of self-efficacy, .74 for Trust in students and parents, .68 for Academic Emphasis dimensions. Despite low reliability coefficients, no changes were made in the scale as the model fit was acceptable.

Table 3.11

Standardized Regression Weights of the Academic Optimism Scale Factors

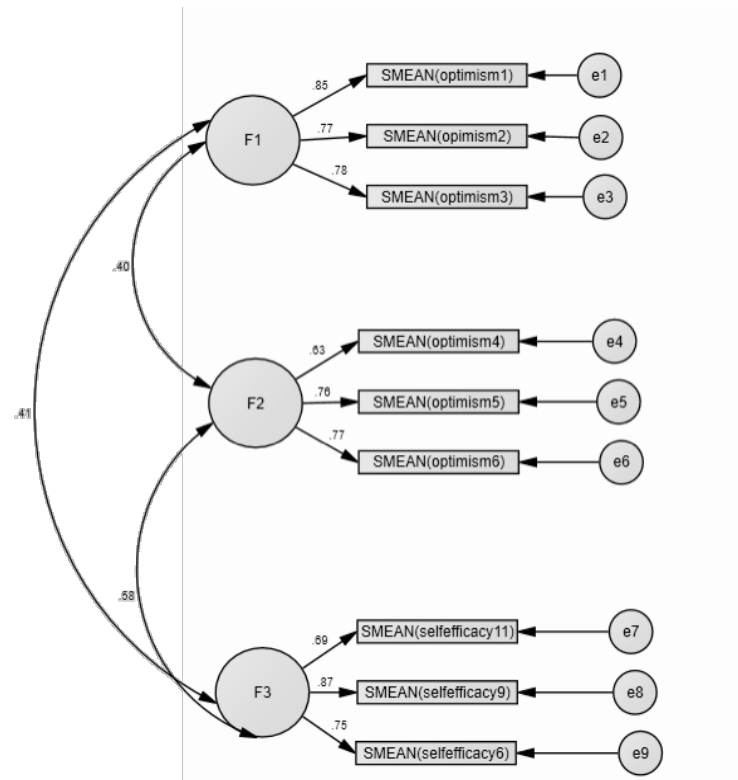
	Estimate	<i>p</i>
Optimism1 ← Trust in students and parents	0.63	.00
Optimism2 ← Trust in students and parents	0.54	.00
Optimism 3 ← Trust in students and parents	0.64	.00
Optimism 4 ← Academic emphasis	0.91	.00
Optimism 5 ← Academic emphasis	0.56	.00
Optimism 6 ← Academic emphasis	0.61	.00
Self-efficacy 6 ← Sense of self-efficacy	0.53	.00
Self-efficacy 9 ← Sense of self-efficacy	0.80	.00
Self-efficacy 11 ← Sense of self-efficacy	0.59	.00



F1: Trust to students and parents, F2: Academic emphasis, F3: Sense of self-efficacy

Figure 3.4. Confirmatory factor analysis results for the Teacher Academic Optimism Scale with pilot study data.

3.4.4.1.2 *Confirmatory Factor Analysis with the Main Study Data.* Using the main study data, a CFA was conducted to test the factor structure of the Academic Optimism Scale. The model produced good fit with the indices of $X^2/df = 2.28$, $p = .00$, TLI = .99, CFI = .99, SRMR = .026, and RMSEA = .027. All items loaded to respective models significantly with loadings ranging from .63 to .87 (Figure 3.5). Moreover, standardized regression weights of the Academic Optimism Scale factors can also be observed in Table 3.12. Different from the pilot study, Cronbach alpha coefficients were found to be .81 for Sense of self-efficacy, .85 for Trust in students and parents, .76 for Academic Emphasis dimensions that are above the acceptable criteria of .70 (Nunnally, 1978).



F1: Trust to students and parents, F2: Academic emphasis, F3: Sense of self-efficacy

Figure 3.5. Confirmatory factor analysis results for the Teacher Academic Optimism Scale with the main study data.

Table 3.12

Standardized Regression Weights of the Academic Optimism Scale Factors

	Estimate	<i>p</i>
Optimism1 ← Trust in students and parents	.85	.00
Optimism2 ← Trust in students and parents	.77	.00
Optimism 3 ← Trust in students and parents	.78	.00
Optimism 4 ← Academic emphasis	.63	.00
Optimism 5 ← Academic emphasis	.76	.00
Optimism 6 ← Academic emphasis	.77	.00
Self-efficacy 6 ← Sense of self-efficacy	.75	.00
Self-efficacy 9 ← Sense of self-efficacy	.87	.00
Self-efficacy 11 ← Sense of self-efficacy	.69	.00

3.4.5 Commitment to Teaching Profession Scale. Developed by Kozikoğlu (2016) in Turkish for in-service teachers, Commitment to Teaching Profession Scale measures teachers' levels of commitment to the teaching profession on a 5-point scale (1: Strongly disagree; 5: Strongly agree). The 20-item scale has 3 dimensions: (1) professional adherence, (2) devotion, and (3) commitment to students. Their exploratory factor analysis indicated that the three factors accounted for 58% of the variance. Factor loadings ranged from .63 to .86 for the *Professional adherence* dimension, from .59 to .72 for the *Devotion* dimension, and from .58 to .78 for the *Commitment to students* dimension. Kozikoğlu (2016) also reported acceptable reliability scores as 0.92, 0.86, and 0.70 for the abovementioned scale dimensions respectively. The researcher, however, did not conduct a CFA and recommended it for further research. Sample items for each subscale are presented in Table 3.13.

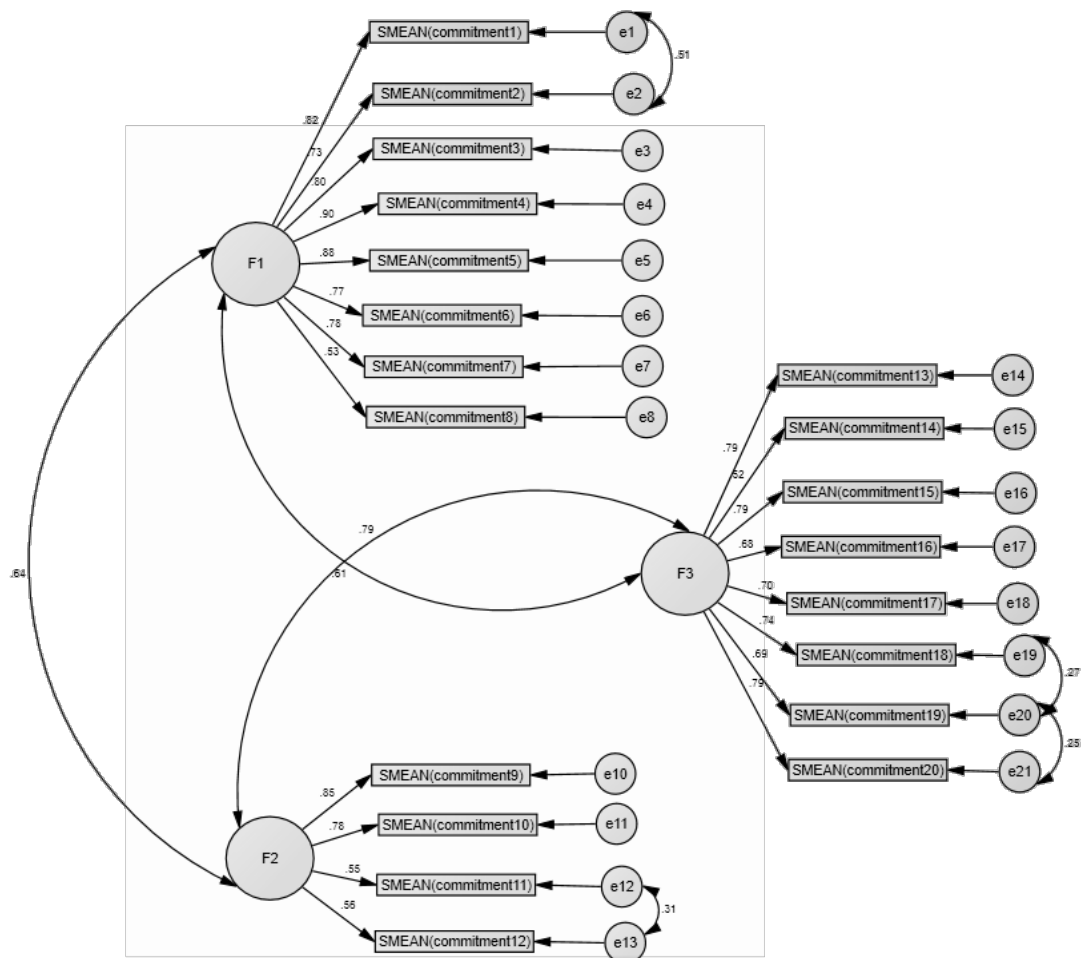
Table 3.13

Sample Items of the Commitment to Teaching Profession Scale

Construct	Sample item	Number of items
<i>Professional adherence</i>	“I love the profession of teaching.” [Öğretmenlik mesleğini severek yapıyorum.]	8
<i>Devotion</i>	I put in extra effort to maintain the quality of my teaching. [Mesleğimi nitelikli olarak devam ettirmek için çok çaba harcıyorum.]	4
<i>Commitment to students</i>	“It is important for me to increase the potential of my students to their uttermost level.” [Öğrencilerimin potansiyellerini en üst seviyeye çıkarmak benim için çok önemlidir.]	8

3.4.5.1 Validity and reliability of Commitment to Teaching Profession Scale.

Utilizing the main study data, a CFA was conducted to test the three-factor structure proposed by Kozikoglu (2016). Initial analysis did not offer an acceptable fit: $X^2/df = 5.45$, $p = .00$, $TLI = .88$, $CFI = .90$, $SRMR = .059$, and $RMSEA = .090$, therefore, error covariances of 4 pairs of items higher than a value of 23 were freely estimated. After this modification, indices yielded reasonable fit: $X^2/df = 4.01$, $p = .00$, $TLI = .92$, $CFI = .93$, $SRMR = .056$, and $RMSEA = .074$ (See Figure 3.6). All items loaded to respective models significantly with loadings ranging from .55 to .91 (Table 3.14). Reliability coefficients of the factors were found to be .92 for *Professional adherence*, .79 for *Devotion*, and .89 for *Commitment to students*.



F1: Professional adherence, F2: Devotion, F3: Commitment to students

Figure 3.6. Confirmatory factor analysis results for Commitment to Teaching Profession Scale.

Table 3.14

Standardized Regression Weights of the Commitment to Teaching Profession Scale Factors

	Estimate	<i>p</i>
commitment1 ← Professional adherence	.82	.00
commitment2 ← Professional adherence	.73	.00
commitment3 ← Professional adherence	.80	.00
commitment4 ← Professional adherence	.90	.00
commitment5 ← Professional adherence	.88	.00
commitment6 ← Professional adherence	.77	.00
commitment7 ← Professional adherence	.78	.00
commitment8 ← Professional adherence	.53	.00
commitment9 ← Devotion	.85	.00
commitment10 ← Devotion	.78	.00
commitment11 ← Devotion	.55	.00
commitment12 ← Devotion	.56	.00
commitment13 ← Commitment to students	.79	.00
commitment14 ← Commitment to students	.52	.00
commitment15 ← Commitment to students	.79	.00
commitment16 ← Commitment to students	.68	.00
commitment17 ← Commitment to students	.70	.00
commitment18 ← Commitment to students	.74	.00
commitment19 ← Commitment to students	.69	.00
commitment20 ← Commitment to students	.79	.00

3.5 Data Collection Procedure

Prior to initiating the research, in order to prevent any potential deviation from the principles of research ethics, relevant permissions were obtained from METU Human Subjects Ethics Committee. Consequently, permissions were obtained from the Ministry of National Education. The participants were asked to participate in the study on a voluntary basis and complete an informed consent form where the confidentiality of their responses is strongly stressed. Before requesting to complete the data collection instrument, all participants were informed about the purpose of the study. Data were collected by three pollsters. They were briefed about the purpose of the study and the procedure of data collection in the randomly selected schools in Ankara. They administered the data collection instrument to teachers in the teachers' room data given the permission of the school principals. The instrument was

enveloped and distributed to the teachers individually. The administration of the instrument ranged from 10 to 15 minutes. The pollsters picked up the completed instruments the same day of data collection. The data collection process took place from May 2018 to June 2018.

3.6 Data Analysis

The data were analyzed through both descriptive and inferential statistics. Descriptive statistics included the calculation of means, standard deviations, frequencies, and percentages of the variables in the study. Prior to inferential analysis, missing data, influential outliers, normality, and linearity were screened. For missing data, Little's Missing Completely At Random (MCAR) test was utilized. In order to satisfy the requirement, a *p*-value of more than 0.05 is essential showing that the missing data is ignorable. For influential outliers, Mahalanobis distance with a Chi-square cut-off for 17 variables entering the analysis at .001 alpha level is sought and cases above this value are considered as outliers. As for univariate normality, skewness and kurtosis values should be between -3 and +3; while multivariate normality requires a non-significant result for Mardia's test (Tabachnick & Fidell, 2012). Linearity necessitates the examination of bivariate scatter plots; oval shape of data points indicates that linearity is satisfied and the variances are homogeneously distributed.

As preliminary analyses, several one-way Multivariate Analyses of Variance (MANOVA) were conducted. In these analyses, the dependent variables were the six dimensions of the Teacher Agency Scale: planning, instruction, dissemination, community service, empowerment, and evaluation. The independent variables were teachers' faculty of graduation, subjects they teach, their foreign language knowledge, and the school level they are working at. For descriptive statistics and MANOVA, Statistical Package for the Social Sciences (SPSS) 24 was utilized.

Before moving to answer the research question, the measurement model was tested through the Confirmatory Factor Analysis (CFA). Through Structural Equation Modeling (SEM), the relationships among the teacher agency and personality traits, academic optimism, and commitment to teaching profession were estimated. Therefore, the exogenous variable of the study was personality traits, while the endogenous variables were academic optimism, commitment to the teaching profession, and teacher agency. In SEM analysis, direct and indirect effects are calculated by standardized parameter estimates. Direct effects included the effects of personality traits, academic optimism, and commitment to teaching profession on teacher agency, while the indirect effects comprised of the effect of personality traits through both academic optimism and commitment to the teaching profession. To assess the goodness-of-fit, Chi-square (χ^2), Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), and Root Mean Square Error of Approximation (RMSEA) indices were considered. Chi-square cut off values should be close to 0 for a perfect fit, and the *p*-value should be non-significant. Chi-square statistics, on the other hand, is known to be highly sensitive to sample size (Tabachnick & Fidell, 2012); therefore, other goodness of fit indices were mainly consulted for the testing of the hypothesized models. CFI and NNFI are incremental fit indices, whereas RMSEA tells how well the model fits the population covariance matrix (Byrne, 2009). The CFI and NNFI values should not be lower than .95 while RMSEA and SRMR values should be lower than .08 for an acceptable fit (Hu & Bentler, 1999; MacCallum, 1992). For the CFA and SEM, Analysis of Moment Structures (AMOS) 18 was used.

3.7 Limitations of the Study

Since a non-experimental, correlational design was applied in the study, and a correlational analysis as structural equation modeling is employed, the usual cautions about causality should be considered (Tabachnick & Fidell, 2012). That is, the predictors utilized in this study cannot be inferred to be causes of but can only be suggested to explain a certain amount of variance in teacher agency. Yet, the study is

limited to the public schools selected districts of Ankara (viz. Altındağ, Beypazarı, Çankaya, Etimesgut, Gölbaşı, Haymana, Keçiören, Mamak, Polatlı, Pursaklar, Sincan, and Yenimahalle) since private schools and other cities were restrained within the scope this research. As the exact number of data collected from each district is not known, the representativeness could not be checked through statistical analyses. Moreover, data were obtained through self-report measures in the present study. It is possible that they do not reflect participants' real feelings as they may be affected by social desirability problem. Finally, the personality inventory used in this study is a short-form scale that might not essentially capture the totality of human personality and, therefore, teachers' personality traits might not have been totally accounted for in the model.

CHAPTER 4

RESULTS

This chapter focuses on presenting the results of the data analysis. The results are presented in three sections: descriptive statistics, preliminary analyses, and the results of the structural equation modeling.

4.1 Descriptive Statistics

Table 4.1 offers a descriptive sketch of the data based on the means and standard deviations of study variables. The results show that over a scale of 7, teachers reported themselves as being conscientious more than other personality traits ($M = 6.22$, $SD = 1.03$). They further found themselves to be less emotionally stable ($M = 5.17$, $SD = 1.22$) than extroverted ($M = 5.74$, $SD = 1.18$), agreeable ($M = 5.45$, $SD = 1.28$), and open to new experiences ($M = 5.36$, $SD = 1.17$).

In terms of commitment levels of teachers, they appeared to be mostly committed to the profession, reporting approximately a value of 4 out of the 5-point scale. Their professional adherence score mean was 4.06 ($SD = 0.78$), while they reported a mean of 3.97 ($SD = 0.65$) for devotion. Finally, they reported being more committed to their students than other dimensions with a mean of 4.19 ($SD = 0.57$).

When it comes to teachers' academic optimism levels, it was seen that they held a fair sense of self-efficacy beliefs ($M = 7.01$, $SD = 1.15$), relatively trusted their students ($M = 3.70$, $SD = 0.68$), and mostly put academic emphasis on them ($M = 3.99$, $SD = 0.68$).

Ultimately, teachers reported more effort to make a change in evaluating their students and themselves ($M = 3.82$, $SD = 0.71$) than they did for serving the community ($M = 2.91$, $SD = 1.02$) and disseminating their knowledge ($M = 2.97$, $SD = 0.86$). Following evaluation, teachers demonstrated most agentic actions in terms of adjusting their instruction ($M = 3.68$, $SD = 0.66$). They almost equally took their teaching to a different level in the dimensions of empowerment of students ($M = 3.45$, $SD = 0.81$) and planning ($M = 3.43$, $SD = 0.85$).

Table 4.1
Means and Standard Deviations of Study Variables

Variable	<i>M</i>	<i>SD</i>
Personality traits ¹		
Openness to experiences	5.36	1.17
Agreeableness	5.45	1.28
Emotional Stability	5.17	1.22
Conscientiousness	6.22	1.03
Extraversion	5.74	1.18
Commitment to teaching profession ²		
Professional adherence	4.06	0.78
Devotion	3.97	0.65
Commitment to students	4.19	0.57
Academic optimism		
Sense of efficacy ³	7.01	1.15
Trust ²	3.70	0.68
Academic emphasis ²	3.99	0.68
Teacher agency ²		
Planning	3.43	0.85
Instruction	3.68	0.66
Dissemination	2.97	0.86
Community service	2.91	1.02
Empowerment	3.45	0.81
Evaluation	3.82	0.71

Note. 1: 7-point scale, 2: 5-point scale, 3: 9-point scale.

Correlations among the study variables can be viewed in Table 4.2. The results of the correlational analysis showed that all of the sub-dimensions of the exogenous and endogenous variables were significantly and positively correlated with one another, with Pearson correlation coefficient values ranging from .09 to .75.

Table 4.2
Bivariate Correlations among Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Planning	-																
2. Instruction	.57**	-															
3. Dissemination	.54**	.68**	-														
4. Community service	.51**	.63**	.72**	-													
5. Empowerment	.59**	.75**	.67**	.69**	-												
6. Evaluation	.53**	.69**	.57**	.52**	.73**	-											
7. Openness	.17**	.27**	.21**	.17**	.22**	.26**	-										
8. Agreeableness	.09*	.16**	.10*	.12**	.14**	.21**	.26**	-									
9. Stability	.10*	.18**	.13**	.11*	.15**	.20**	.27**	.31**	-								
10. Conscientiousness	.17**	.23**	.17**	.15**	.21**	.27**	.34**	.34**	.44**	-							
11. Extraversion	.22**	.27**	.23**	.23**	.22**	.25**	.39**	.32**	.32**	.45**	-						
12. Professional adherence	.34**	.32**	.29**	.22**	.34**	.38**	.09*	.19**	.16**	.14**	.13**	-					
13. Devotion	.40**	.47**	.46**	.33**	.41**	.43**	.18**	.14**	.15**	.17**	.16**	.55**	-				
14. Commitment to students	.40**	.53**	.37**	.35**	.44**	.51**	.22**	.22**	.16**	.17**	.20**	.56**	.63**	-			
15. Sense of efficacy	.33**	.48**	.37**	.36**	.42**	.45**	.28**	.21**	.26**	.30**	.32**	.28**	.33**	.38**	-		
16. Trust	.19**	.31**	.24**	.25**	.25**	.26**	.13**	.14**	.14**	.13**	.19**	.22**	.22**	.30**	.35**	-	
17. Academic emphasis	.20**	.42**	.34**	.31**	.38**	.45**	.20**	.12**	.10*	.21**	.18**	.28**	.35**	.40**	.46**	.33**	-

* $p < .05$, ** $p < .01$

4.2 Preliminary Analyses

Before moving on the main results, a series of preliminary analyses were carried out to understand the relationship between certain individual-level factors and the outcome variable of the study. In the first section, findings of four separate one-way Multivariate Analyses of Variance (MANOVA) are presented. For these analyses, the outcome variables were six dimensions of teacher agency, namely planning, instruction, dissemination, community service, empowerment, and evaluation. The second section reports the findings of correlational analyses between dimensions of agency and the following variables: years of teaching experience, the number of students the teachers teach, perceived student success, level of student motivation, and the frequency of discipline problems.

4.2.1 Multivariate Analyses of Variance (MANOVA). A series of one-way Multivariate Analysis of Variance (MANOVA) were conducted to assess the predictive effects of the following variables: faculty graduated, subjects they teach, foreign language knowledge, and school level where the dependent variables were six dimensions of teacher agency, namely planning, instruction, dissemination, community service, empowerment, and evaluation. When the assumptions of MANOVA were checked, homogeneity of covariance matrices assumption was seen to be violated (For “faculty graduated” variable, Box M = 21.99, $p < .05$, for “subjects they teach”, Box M = 135.71, $p < .05$, for “foreign language knowledge” variable, Box M = 29.16, $p < .05$, and for “school level” variable, Box M = 56.48, $p < .05$). For the purpose of conservation due to this violation, the multivariate effect was evaluated based on Pillai’s trace (Tabachnick & Fidell, 2012). While significance was judged at an alpha level of .05 for multivariate tests, significance for the univariate analyses was set at alpha .01 based on Bonferroni correction.

Descriptive statistics for these analyses are summarized in Table 4.3. Findings indicated that there exist meaningful differences among teachers’ agency in terms of

faculty of graduation, subjects they teach, foreign language knowledge, and school level.

Table 4.4 presents results of four separate MANOVAs employed for the following independent variables: faculty of graduation, subjects they teach, foreign language knowledge, and school level and the results are reported below.

4.2.1.1 Faculty of graduation. One-way MANOVA indicated that faculty of graduation did not have a significant contribution on teacher agency, Pillai's trace = .02, $F(6, 541) = 1.52$, *n.s.* This finding showed that no significant difference appeared between teachers who graduated from faculty of education and teachers who did not graduate from faculty of education.

4.2.1.2 Subject matter. The independent variable, "subject matters participants teach" are categorized into five categories:

1. Language arts (Turkish, English, German, French),
2. Math and Science (Mathematics, Physics, Chemistry, Biology),
3. Social sciences (History, Philosophy, Geography, Social sciences, Moral education),
4. Culture and Fine arts (Music, Art, Physical Education, Computer science),
5. Vocational courses (Electronics, Accounting, Child development).

Table 4.3

Descriptive Statistics for Faculty Graduated, Subject matter, Foreign Language Knowledge, and School Level

Variable	Planning	Instruction	Dissemination	Community service	Empowerment	Evaluation
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Faculty graduated						
Faculty of education	3.47 (0.86)	3.71 (0.67)	3.02 (0.85)	3.01 (1.02)	3.50 (0.85)	3.83 (0.73)
Other	3.37 (0.83)	3.64 (0.65)	2.90 (0.88)	2.77 (1.01)	3.39 (0.76)	3.81 (0.68)
Subject matter						
Language arts	3.41 (0.88)	3.73 (0.68)	3.01 (0.84)	3.00 (1.01)	3.54 (0.78)	3.91 (0.68)
Math and Science	3.22 (0.79)	3.59 (0.61)	2.70 (0.78)	2.58 (0.96)	3.26 (0.71)	3.67 (0.64)
Social sciences	3.15 (0.77)	3.56 (0.60)	2.74 (0.82)	2.78 (0.95)	3.25 (0.72)	3.71 (0.73)
Culture and Fine arts	3.54 (0.81)	3.82 (0.67)	3.19 (0.86)	3.23 (1.03)	3.67 (0.81)	3.93 (0.78)
Vocational courses	3.61 (0.88)	3.83 (0.62)	3.33 (0.89)	3.16 (1.00)	3.76 (0.75)	3.87 (0.73)
Foreign language knowledge						
None	3.32 (0.86)	3.51 (0.66)	2.75 (0.80)	2.74 (0.98)	3.30 (0.81)	3.62 (0.77)
One of more	3.50 (0.83)	3.76 (0.64)	3.08 (0.86)	3.00 (1.02)	3.52 (0.81)	3.90 (0.66)
School level						
Secondary school	3.44 (0.83)	3.70 (0.69)	2.97 (0.87)	3.06 (0.98)	3.50 (0.85)	3.82 (0.73)
High school	3.40 (0.87)	3.66 (0.64)	2.96 (0.86)	2.77 (1.03)	3.41 (0.79)	3.80 (0.69)

One-way MANOVA for the subject matter teachers teach is significant, Pillai's trace = .12, $F(24, 1780) = 2.32, p < .05, \eta^2 = .03$. Univariate results demonstrated that there was a significant effect of the subject matter the teachers teach in terms of *planning*, *dissemination*, *community service*, and *empowerment*, while it did not predict agency in *instruction* and *evaluation*. Scheffé post-hoc results revealed significant differences among teachers teaching different subject matters for certain teacher agency domains. However, although subject matter appeared to make a difference in *planning*, no difference was identified in the post-hoc test results. Moreover, teachers who taught Culture and Fine arts ($M = 3.19, SD = 0.86$) as well as Vocational courses ($M = 3.33, SD = 0.89$) were more agentic than their colleagues who teach Math and Science courses ($M = 2.70, SD = 0.78$) in terms of *disseminating* their knowledge and experiences. There were no significant differences among other subject matter teachers' agency in Language arts ($M = 3.01, SD = 0.84$) and Social sciences ($M = 2.74, SD = 0.82$), Culture and Fine arts, and Vocational courses. Moreover, Culture and Fine arts ($M = 3.23, SD = 1.03$) and Vocational courses teachers ($M = 3.16, SD = 1.00$) contributed more to *community service* than Math and Science teachers ($M = 2.58, SD = 0.96$). Once more, no significant differences existed among other subject matter teachers. Finally, again Culture and Fine arts ($M = 3.67, SD = 0.81$) and Vocational courses ($M = 3.76, SD = 0.75$) teachers *empowered* their students more than their colleagues who taught Math and Science ($M = 3.26, SD = 0.71$) courses while no other significant differences existed among the other subject matter teachers in terms of empowerment of students.

4.2.1.3 Foreign language knowledge. The One-way MANOVA findings, Pillai's trace = .05, $F(6, 520) = 4.36, p < .05, \eta^2 = .05$, and follow-up univariate tests showed that teachers who knew one or more foreign languages reported higher agency than their colleagues on every sub-dimension of teacher agency except for *planning* ($M_{one\ or\ more} = 3.50, SD = 0.83; M_{none} = 3.32, SD = 0.86$), i.e. on *instruction* ($M_{one\ or\ more} = 3.76, SD = 0.64; M_{none} = 3.51, SD = 3.76$), *dissemination* ($M_{one\ or\ more} = 3.08, SD = 0.86; M_{none} = 2.75, SD = 0.80$), *community service* ($M_{one\ or\ more} = 3.00, SD$

= 1.02; $M_{none} = 2.74$, $SD = 0.98$), *empowerment* ($M_{one\ or\ more} = 3.52$, $SD = 0.81$; $M_{none} = 3.30$, $SD = 0.81$), and *evaluation* ($M_{one\ or\ more} = 3.90$, $SD = 0.66$; $M_{none} = 3.62$, $SD = 0.77$). These results indicate that teachers who are able to read, write and speak a foreign language took more agentic actions except for in terms of planning.

4.2.2.4 School level. One-way MANOVA for the school level variable is statistically significant, Pillai's trace = 3.28, $F(12, 1072)$, $p < .05$, $\eta^2 = .04$. Univariate tests yielded that teachers working at secondary school level ($M = 3.06$, $SD = 0.987$) tended to be more agentic in terms of *community service* than high school teachers ($M = 2.77$, $SD = 1.03$). That is, teachers at secondary schools, when compared to high school teachers, organized activities that embraces and contributes the community, parents and other schools and educational environments. No significant differences existed between secondary and high school teachers in terms *planning* ($M_{secondary} = 3.44$, $SD = 0.83$; $M_{high} = 3.40$, $SD = 0.87$), *instruction* ($M_{secondary} = 3.76$, $SD = 0.69$; $M_{high} = 3.66$, $SD = 0.64$), *dissemination* ($M_{secondary} = 2.97$, $SD = 0.87$; $M_{high} = 2.96$, $SD = 0.86$), *empowerment* ($M_{secondary} = 3.50$, $SD = 0.85$; $M_{high} = 3.41$, $SD = 0.79$), and *evaluation* ($M_{secondary} = 3.82$, $SD = 0.73$; $M_{high} = 3.80$, $SD = 0.69$).

Table 4.4

Multivariate and Univariate Analyses of Variance Main Effects of Faculty Graduated, Subject Matter, Foreign Language, and School Level on Teacher Agency

Variable	Univariate														
	Multivariate			Planning			Instruction			Dissemination			Community service		
	F	p	η^2	F	p	η^2	F	p	η^2	F	p	η^2	F	p	η^2
Faculty graduated	1.52	.17	-	-	-	-	-	-	-	-	-	-	-	-	-
Subject matter	2.32**	.00	.03	4.20**	.00	.04	3.04	.017	-	8.35**	.00	.07	6.95**	.00	.06
Foreign language	4.36*	.00	.05	5.04	.03	.01	15.23**	.00	.03	17.03**	.00	.03	7.16**	.01	.031
School level	3.60*	.00	.04	.35	.56	-	.47	.49	--	.02	.89	--	10.89*	.00	.02

* $p < .05$, ** $p < .01$

Note. Multivariate F ratios were generated from Pillai's trace.

4.2.2 Bivariate Correlations. In order to understand the relationship between teacher agency and other variables including years of teaching experience, the number of students the teachers are working with, total work hours, perceived student success, level of student motivation, and the frequency of discipline problems which are on interval/ratio scale of measurement, bivariate correlations were examined and presented in Table 4.5.

Findings showed that years of teaching experience and total work hours did not correlate with any dimension of teacher agency. Furthermore, total number of students the teachers are working with significantly and negatively correlated with *planning* actions of teachers ($r = -0.9, p < .05$). The more students the teachers taught, the less agentic actions they demonstrated in terms of planning their teaching. No significant correlations existed between total number of students and other dimensions of teacher agency.

Participants were also asked about their perceptions regarding their students' success, student motivation, and the frequency of discipline problems in their schools. Student success was found to be positively and significantly correlated with agency in *instruction* ($r = .11, p < .05$) and in *community service* ($r = .11, p < .05$). That is, when teachers perceived their students as successful, they acted as agents in instruction and community service. No significant correlations existed with student success and other dimensions of teacher agency.

Besides, the level of student motivation was found to be significantly and positively correlated with teacher agency in terms of *planning* ($r = .10, p < .05$), *instruction* ($r = .19, p < .05$), *dissemination* ($r = .12, p < .05$), *community service* ($r = .16, p < .05$), and *empowerment* ($r = .15, p < .05$). Teachers who considered that the students are highly motivated to learn, they acted as agents in planning and instruction, engaged more in community service, empowered their students in educational activities, and

Table 4.5

Bivariate correlations among Experience, Number of Students, Total Work Hours, Student Success, Student Motivation, Student

Discipline, and Teacher Agency

Variables	Planning	Instruction	Dissemination	Community service	Empowerment	Evaluation
Years of teaching experience	.01	.05	-.01	.03	.02	.00
Number of students	-.09*	.03	-.01	-.08	-.04	-.04
Total work hours	.06	.01	.03	.06	.01	-.03
Perceived student success	.02	.11**	.07	.11**	.08	.01
Level of student motivation	.10*	.19**	.12**	.16**	.15**	.07
The frequency of discipline problems	.01	-.06	.04	.09*	.05	-.04

* $p < .05$, ** $p < .01$

disseminated their knowledge and practices. There, however, were no significant relationship existed between perceived student motivation and evaluation. Yet, teachers who evaluated the frequency of discipline problems as high displayed more agentic behaviors only in *community service* dimension of agency ($r = .09, p < .05$). No significant correlations existed between perceived discipline problems and other dimensions of teacher agency.

4.3 Structural Equation Modeling Results

This section introduces the results of Structural Equation Modeling (SEM). It starts with assumption check followed by the measurement model, and ends with the testing of the hypothesized model.

4.3.1 Assumptions of SEM. Before initializing the analyses, assumptions of modeling were checked. Regarding the sample size, data were large enough to run the analysis since Kline (2011) suggested the sample size to be around 200. Univariate normality indicators as skewness and kurtosis values were screened and no cases exceeded the +3 and -3 cut off criteria offered by Tabachnick and Fidell (2012), proving the data were normally distributed (See Appendix E). Multivariate normality test results evidenced by Mardia's test (Tabachnick & Fidell, 2012) were significant, therefore bootstrapping technique was utilized in the modeling analyses. Linearity indicators showed that these assumptions were satisfied. In terms of influential observations, 21 cases of outliers were found to be beyond the critical Mahalanobis distance Chi-square cut-off of 40.79 for 17 variables at .001 alpha level. Two sets of data, one with and one without the outliers were tested for validity checks and the set excluding the outliers yielded a more stable structure each time. Therefore, subsequent analyses were conducted on a total of 556 participants. These data then were assessed for missing values. Little's MCAR test yielded non-significant results ($\chi^2_{agency} (1127) = 1380.95, p > .05$; $\chi^2_{academic\ optimism} (106) = 108.11, p > .05$; $\chi^2_{commitment} (347) = 406.55, p > .05$; $\chi^2_{personality} (170) = 264.85, p > .05$), which showed that the

incomplete data were missing at random. In order not to lose variation in data, missing data were imputed using mean imputation technique where the missing values on a certain variable are replaced by the mean of the available cases. SPSS 24.0 was utilized for this procedure.

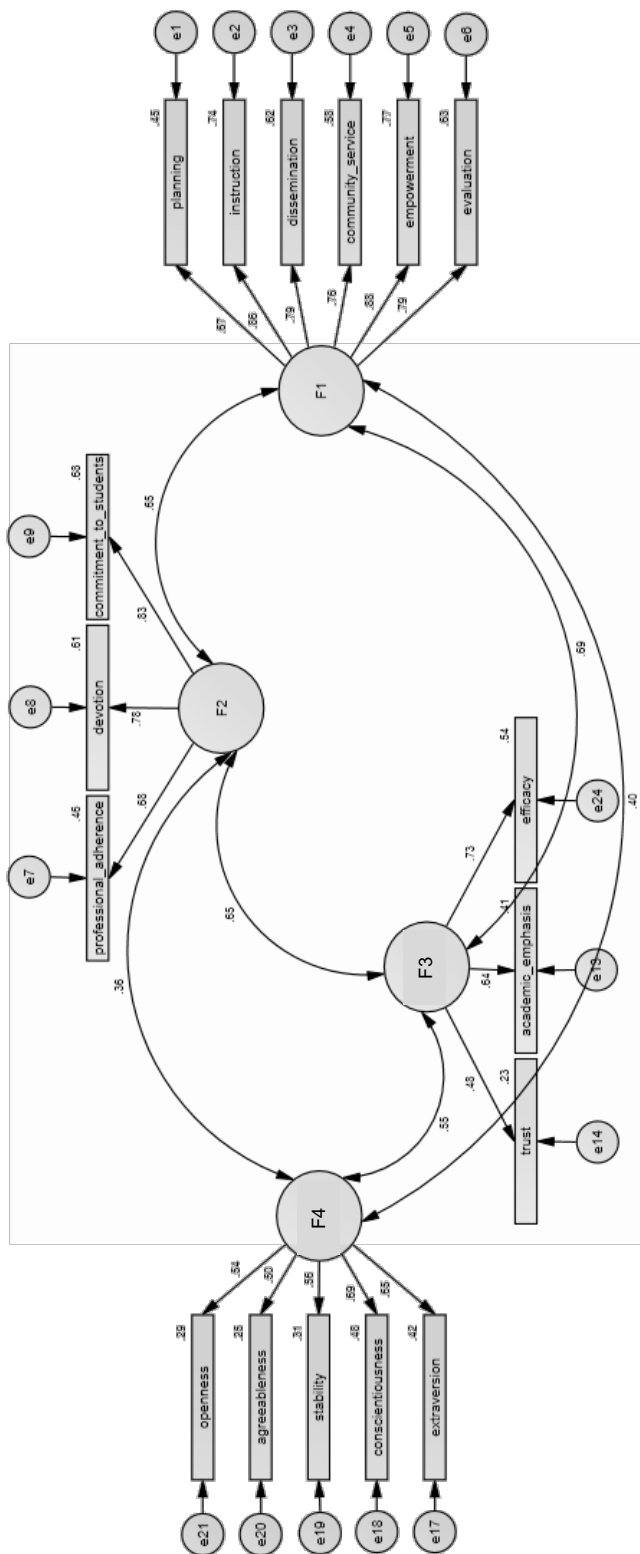
4.3.2 Measurement model. The measurement model was tested through the Confirmatory Factor Analysis (CFA) sketching the relationship among latent and observed variables (Byrne, 2009). Results of the CFA showed acceptable fit for the measurement model with $\chi^2/df = 2.95$, $p = .00$, TLI = .93, CFI = .95, RMSEA = .059, and SRMR = .04. Figure 4.1 represents the measurement model with standardized estimates and latent correlations.

Table 4.6 offers the standardized estimates. Standardized estimates ranged from .73 to .94 and all of the regression weights were significant.

Table 4.6

Standardized Regression Weights of the Measurement Model

	Estimate
Openness \leftarrow Personality traits	.54
Agreeableness \leftarrow Personality traits	.50
Emotional stability \leftarrow Personality traits	.56
Conscientiousness \leftarrow Personality traits	.69
Extraversion \leftarrow Personality traits	.65
Planning \leftarrow Teacher agency	.67
Instruction \leftarrow Teacher agency	.86
Dissemination \leftarrow Teacher agency	.79
Community service \leftarrow Teacher agency	.76
Empowerment \leftarrow Teacher agency	.88
Evaluation \leftarrow Teacher agency	.79
Professional adherence \leftarrow Commitment	.68
Devotion \leftarrow Commitment	.78
Commitment to students \leftarrow Commitment	.83
Trust in student and parents \leftarrow Academic optimism	.48
Academic emphasis \leftarrow Academic optimism	.64
Sense of self-efficacy \leftarrow Academic optimism	.73



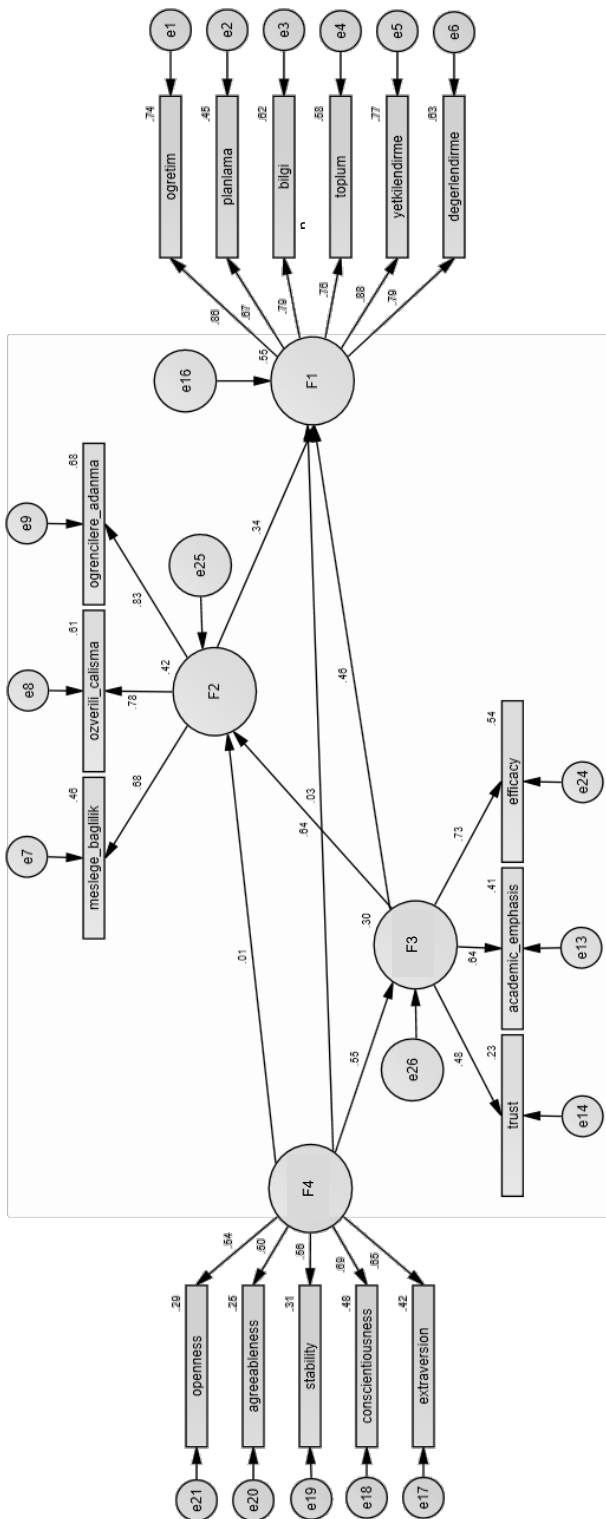
Note. F1: Teacher agency, F2: Commitment to teaching profession, F3: Academic optimism,

$$(\chi^2/df = 2.95, TLI = .93, CFI = .95, RMSEA = .059, SRMR = .040)$$

Figure 4.1. Measurement model with standardized estimates and latent correlations.

4.3.3 Structural model. The purpose of this study was to model the relationships among personality traits, academic optimism, commitment to the teaching profession, and teacher agency. The structural model was tested by using 2000 bootstrapped samples at 95% confidence interval to estimate the direct and indirect effects among latent variables. The hypothesized model and the SEM results can be observed in Figure 4.2.

Findings indicated that commitment to the teaching profession ($\beta = .34, p < .001$) and academic optimism ($\beta = .46, p < .001$) had significant positive direct effects while personality traits did not have a direct effect ($\gamma = .03, p = .63$) on the outcome variable, i.e., teacher agency. These findings suggest that when teachers have a high level of academic optimism (i.e., trusts in students and parents, has high sense of self-efficacy, and places academic emphasis for his/her students' success) and when they are more committed to their professions, they tend to act as agents to further their teaching endeavors. Academic optimism was the most salient factor predicting teacher agency among all predictors. In addition, personality traits had a significant direct effect ($\gamma = .55, p < .001$) on academic optimism; however, did not have direct effect on commitment to teaching profession ($\gamma = .01, p < .001$). Academic optimism also had a significant direct effect ($\beta = .64, p < .001$) on commitment to teaching profession.



F1: Teacher agency, F2: Commitment to teaching, F3: Academic optimism, F4: Personality traits

Figure 4.2. Hypothesized structural model with standardized estimates.

To ensure clarity, findings are also presented in Figure 4.3 and Table 4.7. Figure 4.3 depicts the structural model with latent variables only.

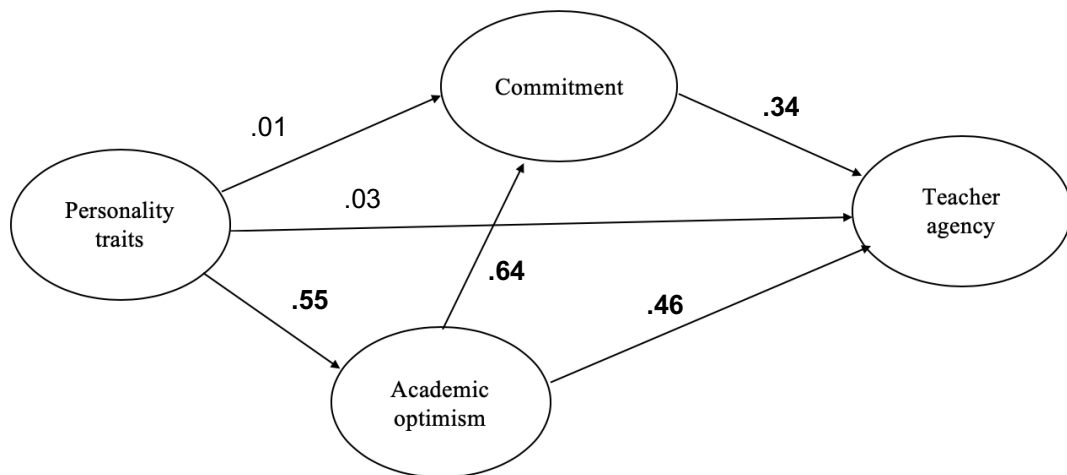


Figure 4.3. Depiction of the hypothesized model with significant and non-significant direct paths, and explained variances. *Note.* Significant values are indicated in bold typeface.

Table 4.7 presents the indicator loadings. As specified in the model, all of the loadings of each indicator with its respective latent variable were also statistically significant. They ranged from .73 to .94, verifying the proposed relationships between the latent variables and their indicators.

Table 4.7

Standardized Regression Weights of the Structural Model

	Estimate	<i>p</i>
Openness ← Personality traits	.54	.00
Agreeableness ← Personality traits	.50	.00
Emotional stability ← Personality traits	.56	.00
Conscientiousness ← Personality traits	.69	.00
Extraversion ← Personality traits	.65	.00
Planning ← Teacher agency	.67	.00
Instruction ← Teacher agency	.86	.00

Table 4.7 (Continued)

	Estimate	<i>p</i>
Dissemination \leftarrow Teacher agency	.79	.00
Community service \leftarrow Teacher agency	.76	.00
Empowerment \leftarrow Teacher agency	.88	.00
Evaluation \leftarrow Teacher agency	.79	.00
Professional adherence \leftarrow Commitment	.68	.00
Devotion \leftarrow Commitment	.78	.00
Commitment to students \leftarrow Commitment	.83	.00
Trust in student and parents \leftarrow Academic optimism	.48	.00
Academic emphasis \leftarrow Academic optimism	.64	.00
Sense of self-efficacy \leftarrow Academic optimism	.73	.00

Table 4.8 presents the indirect effects along with direct and total effects. When indirect effects were examined, the findings demonstrated that personality traits were seen to have a significant indirect effect on teacher agency ($\gamma = .46, p < .01$) via academic optimism and commitment to teaching profession. Academic optimism also had an indirect effect on teacher agency ($\beta = .22, p < .01$) through commitment to the teaching profession. Moreover, personality traits also had a significant indirect effect on commitment to the teaching profession ($\gamma = .35, p < .01$) through academic optimism.

Table 4.8

Standardized Direct, Indirect, and Total Effects in the Model

Predictor	Criterion	Direct effect	Indirect effect	Total effect
Personality traits	Academic optimism	.55*	-	.55*
	Commitment to teaching	.01	.35*	.36*
	Teacher agency	.03	.37*	.40*
Academic optimism	Commitment to teaching	.64*	-	.64*
	Teacher agency	.46*	.22*	.68*
Commitment to teaching	Teacher agency	.34*	-	.34*

* $p < .001$

Finally, Table 4.9 presents the squared multiple correlations. Findings indicated that 55% of the variance teacher agency was explained by direct and indirect effects of personality traits, academic optimism, and commitment to the teaching profession.

Furthermore, academic optimism was predicted with an explained variance of 30%. Commitment to the teaching profession was accounted for a 42% of variance.

Table 4.9

Squared Multiple Correlations for the Hypothesized Structural Model

	Academic optimism	Commitment to teaching	Teacher agency
R^2	.30	.42	.55

4.4 Summary of Results

This study investigated the relationship between teacher agency, and teachers' personality traits, commitment to teaching, and academic optimism through utilizing Structural Equational Modeling. The results indicated good fit between the data and the hypothesized model. It was revealed that teachers' sense of academic optimism and their commitment to the teaching profession were significant predictors of teachers' sense of agency, while the direct effect of personality traits on teacher agency was not significant. On the other hand, personality traits had a significant indirect effect on teacher agency through academic optimism. Personality traits also had a significant indirect effect on commitment to the teaching profession through academic optimism. Moreover, academic optimism had an indirect effect on teacher agency through commitment to the teaching profession. While academic optimism was predicted with an explained variance of 30 percent, commitment to the teaching profession was accounted for a 42 percent of variance. The overall model explained 55 percent of variance in teacher agency.

CHAPTER 5

DISCUSSION

This chapter initially summarizes the findings of the study and discusses the results within the light of related literature. It further offers theoretical, practical, and research-related implications derived from empirical evidence highlighted by this study.

5.1. Summary of the Findings

The thrust of this study was to model the relationship among factors that relate to teacher agency and measuring their predictive power in explaining teachers' agentic behaviors using Structural Equation Modeling. The particular variables under scrutiny were teachers' personality traits, levels of academic optimism, and commitment to the teaching profession. The sample of the study was comprised of 577 secondary and high school teachers working in randomly selected public schools in Ankara.

Initially, teachers' agentic behaviors were measured quantitatively, and a scale was developed for this purpose. Six dimensions of the teacher agency construct were identified and it was evidenced to be comprised of (1) planning of instruction, (2) implementation of instruction, (3) serving to the community, (4) empowerment of students, (5) evaluation of students and teaching, and (6) dissemination of their own practices. This structure indicated that teachers who were observed to carry out agentic actions engaged in individualizing the activities of planning based on the needs of the students using a variety of tools and support, integrated school and out of school learning, fostered students' development through supporting them to engage

in scientific projects and dissemination of them, and used scientific research results in teaching/learning processes, assessed their students' learning in authentic ways, evaluated their teaching using other stakeholders' and their own reflections, organized various parent involvement and acculturation activities, and shared their authentic works with their colleagues, other schools, ministry, and other external stakeholders. Moreover, within the scope of this study, Teacher Academic Optimism Scale - Secondary Teacher Form (Fahy et al., 2010) was adapted to Turkish. The Confirmatory Factor Analyses (CFA) of both scales proved that either of the constructs was successfully measured by the confirmatory models.

When the main data were analyzed, the findings revealed that teacher agency was significantly and positively explained by teachers' academic optimism and their commitment to the teaching profession while personality traits had no significant direct effect on teachers' agentic behaviors. With this structure, the model explained 55% of the variance in teacher agency. Personality traits, however, exerted a significant positive indirect effect on teacher agency through academic optimism. Personality traits also had a significant positive indirect effect on the commitment to the teaching profession through academic optimism. Furthermore, results showed that teachers' academic optimism levels were significantly and positively related to the degree to which teachers feel committed.

5.2 Discussion of the Findings

As mentioned earlier, the agency is a slippery but an important-to define construct. The findings of this research revealed a consistent pattern with the literature in defining the complex but essential dimensions of teacher agency. It was previously put forward that teachers' sense of professional agency is a multifaceted construct. In this study, teachers' agency was confirmed to be the set of actions composed of planning and implementation of instruction, community service, dissemination of

good practices, evaluation of student learning and teaching, and empowerment of students.

Teacher agency was further suggested to be composed of components relating to their efforts to affect and alter classroom conditions for offering effective learning situations and to reflect on their actions (Pyhältöet al., 2015; Soini et al., 2016). Teachers' professional agency was found to relate to such elements as motivation, perceived efficacy, and agentic plans and capabilities and they affected the level of teachers' efforts (Soini et al., 2016). The results of the present study confirmed that teacher agency was indeed a multifaceted construct and was composed of a complex set of interactions.

This study revealed that teacher agency was directly related to teacher academic optimism and commitment to teaching, and indirectly linked to their personality traits indicating and establishing the construct's relation to several affective constructs. When considered altogether, the model of this study stands as a teacher-based version of the agency model proposed by Priestley et al. (2013) and can be seen in Figure 5.1.

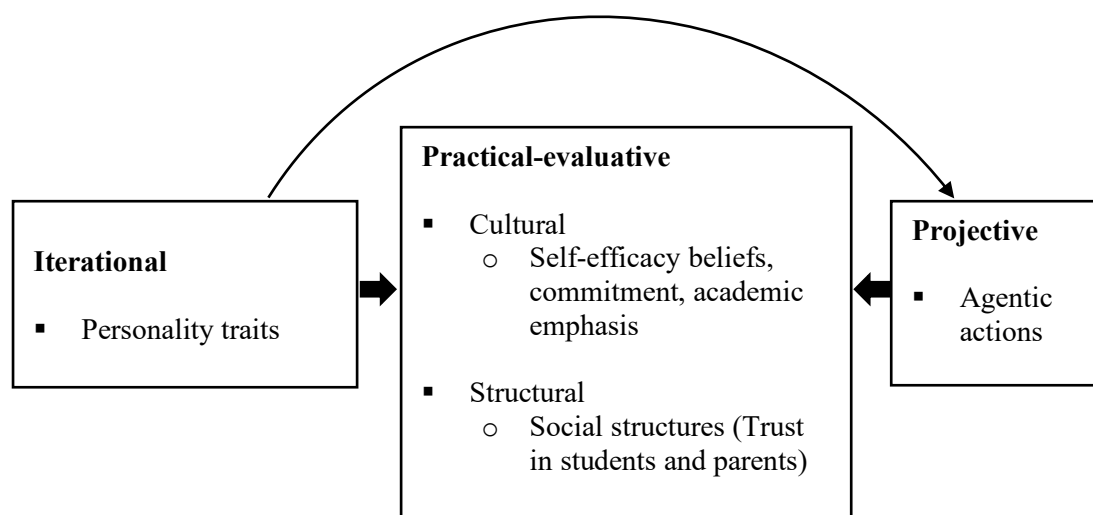


Figure 5.1. The modified teacher agency model.

To begin with, academic optimism levels significantly and positively predicted teachers' agency. Academic optimism is composed of teaching self-efficacy, trust in parents and students, and the emphasis teachers make on students' academic learning (Woolfolk Hoy et al., 2008). This particular result of the study indicated that the more the teachers felt self-efficacious, trusted in parents and students, and placed more academic emphasis, the more agentic behaviors they exhibited. It is important for teachers to have high levels of self-efficacy in order to provide a sound basis for agentic action. Bandura (1977) identified 4 sources of self-efficacy which can shed light on the ways how teachers' self-efficacy can be enhanced. First source is performance accomplishments which can be explained as the personal mastery experiences where the teacher focuses on her/his previous accomplishments and thus feels able and imagines that s/he will succeed in teaching in the future as well. Another source is having indirect experiences of teaching through vicarious learning where the teacher, for instance, observes a successful teaching scenario and extracts related modeling information which will contribute to her/his understanding of good performance. Verbal persuasion is yet another source where the teacher receives positive feedback by her/his environment about her/his capabilities of teaching and is persuaded that s/he can perform successfully. Finally, emotional arousal indicating the currents of a teacher's well-being indicated by her/his emotional and physical states. What is required is to make sure that by feeding these four sources, teachers have the necessary built-in capacity to take informed actions, they can initiate and carry out the necessities of the agentic perspective without doubting their capacity.

Moreover, when teachers trust the students' and parents' capacity for supporting teachers in the actions they carry out, the more teachers feel empowered to support student and community learning by making agentic initiations. Finally, when teachers placed importance on students' academic learning, that is they pushed their students to achieve better, they engaged in more blunt actions to support their learning.

Previous research also identified that the agentic capacity of teachers was directed by their sense of self-efficacy (Hadar & Banish-Weisman, 2019; Soini et al., 2016) and professional self (Vähäsantanen et al., 2009). Therefore, it can be suggested that teacher academic optimism is a significant factor in defining teachers' agency and needs to be supported if teachers are expected to take measures to better student and community learning.

In terms of commitment to the teaching profession, when the teachers were devoted to their profession, they were observed to display more agentic behaviors. If the teachers felt committed to students, they wanted to engage in more actions to support their learning in creative and agentic ways. To the committed teachers, the teaching profession was seen more admirably, they put in extra effort to increase the quality of their teaching, and they cared more about students' development. When a teacher is more committed, students could benefit more from the learning and teaching activities since the teachers exhibited more agentic tasks to improve their achievement. This finding has also been confirmed by the literature that when teachers attach value to their professions, they start to act for providing the best service to students (Gratch, 2000) and they act upon it by their agentic applications. Soini et al. (2016) further put that although the teachers held the skills, if they lacked the motivation, they were unlikely to act. So, it is fairly significant to support teachers' feelings of commitment and ensure that they care about the betterment of the students and the profession so that they can feel responsible for making an effort to take agentic actions to better their instruction.

When it comes to personality traits, this study revealed that personality traits were indirectly related to teacher agency over academic optimism. The more stable the teachers' personality traits, the more academically optimistic they were. This finding indicates that personality traits play an important factor in the way teachers trust the students and parents, the extent to which they are self-efficacious, and the amount of emphasis they place to students' academic development. Therefore, the more stable

the teachers' personality, the more they were inclined to display take on agentic actions via academic optimism. This finding was supported by Gökler and Taştan's (2018) study where the authors found that Big Five personality traits indicator was significantly correlated with school academic optimism with 16 percent of variance explained. In the present study, teacher academic optimism was explained by Big Five personality traits with a percentage of 30.

The findings of this study further revealed a significant correlation between teachers' academic optimism and their commitment levels where academic optimism strongly predicted commitment to the teaching profession. The more the teachers were self-efficacious, trusted parents and teachers, and pressed students academically, the more they felt committed to teaching. These results are in line with the previous research which also revealed a significant relationship between the two constructs (Anwar, 2016; Kurz, 2006; Kurz, Woolfolk Hoy, & Hoy, 2007). Further research indicated that there existed significant relationship between different facets of academic optimism were also related to commitment-related variables such as self-efficacy (Chesnut & Burley, 2015; Moehle, 2011), teachers' intention to quit (Billingsley, 1993; Klassen & Chiu, 2011), job satisfaction (Fresko et al., 1997; Kushman, 1992; Shukla, 2014), and motivation to teaching (Erdoğan, 2013; Rots, Aelterman, Devos, & Vlerick, 2010, Sezgin & Erdoğan, 2015), professional orientation (Rots et al., 2007), high expectations from students (Evans & Tribble, 2001; Kushman, 1992), intrinsic motivation to teaching (Chan, 2006), teacher burnout (Yalçın, 2013), and perceived job fit (Bogler & Nir, 2015). Therefore, it is quite significant for the teachers to feel academically optimistic for them to be motivated for teaching and experience lesser amounts of burnout and intentions to quit. They can thus get more satisfaction from their occupations and perceive themselves as more professional teachers and display more agentic actions to enhance student learning in turn.

5.3 Recommendations for Practice

The present study indicated that there is a need for several actions to be taken into consideration in order to foster teachers' agency. The very first remark is that optimum care needs to be attended to teacher individual factors. Based on the results of this particular study, provided that there is a significant relationship between teacher agency and academic optimism, commitment to students, and indirectly personality traits and, it is highly recommended that priority is given to these individual factors. Necessary actions need to be taken in terms of increasing secondary and high school teachers' commitment to the profession, their academic optimism levels, and personality traits.

For teacher commitment, that is for the teachers to be more committed, they need to see the profession admirably and feel the need to increase the quality of their teaching. So the actions to be taken can include to alter the norms and working conditions to endorse teachers' interpersonal connections (Buchanan, 1974), to establish administrative support (Dworkin, 1987), to instill a need for reaching a high-stakes teaching objective, (Salancik, 1977), to grant autonomy and discretion (Rosenholtz, 1989b; Steers, 1977) learning opportunities, and efficacy about their profession (Rosenholtz, 1989b). Also, public perception of the profession of teaching needs to be altered by supportive policies and the teachers need to feel empowered rather than aligned.

For fostering academic optimism, which is significantly related to both commitment and agency, one suggestion would be to establish an enabling school structure which paves the way for teacher activities and trust-based communication and to have teachers participate in the establishment of rules and regulations (McGuigan & Hoy, 2006). Moreover, building on the four sources of self-efficacy which is a core component of academic optimism, teachers need to be given the chance to have as many mastery experiences as possible, to be exposed to successful teaching models, to be verbally persuaded they are capable and finally, their emotional and physical

well-being should be supported. In terms of trust, supportive community communication networks should be established to support teachers in their agentic actions.

For the part of traits, this study showed that the more stable the teachers' personality, the more academically optimistic and committed they were. Literature has suggested that big five personality traits became more stable over time, from adolescence through adulthood (Soto, John, Gosling, & Potter, 2011). We cannot fast forward the time, however, it can be said that pre-service teachers will reach more stable personality traits compared to the traits while they transfer into the profession since research also suggested that a major motive can lead to differences in the individual if they commit to different social roles such as careers which demand specific behavior patterns (Hudson, Roberts, & Lodi-Smith, 2012). For instance, when a teacher commits to a career necessitates s/he can behave in a more conscientious manner. Moreover, individuals can retain behavioral changes if they have the willpower (Hudson et al., 2012). This piece of information can trigger the idea that if pre- or in-service teachers feel the necessity to alter their personality traits, they can successfully do so. Thus, it is required that a need is instilled in them throughout their education so that they can feel that need to change for a more stable personality.

One of the initial steps that should be taken can be in relation to teacher education since the roots of teachers' agentic interests and actions can be said to take place in teacher education programs. Teacher education programs are known to make a huge difference in turning teacher candidates into effective and well-prepared teachers or otherwise. However, what is implemented is, they are trained as "curriculum technicians who can navigate the system efficiently, selecting and combining learning outcomes and assessment techniques in time and cost-efficient ways that can be recorded on readily intelligible checklists and formats: an assembly line approach"; therefore, the teaching processes are depersonalized and disjointed (Hill, 2003, p. 103). Considering this, agentic perspective should be embedded in and developed throughout the teacher education programs where peer support groups may be

established and strong relations with mentor teachers can be built (Gratch, 2000) and their agency should be promoted (Cohen & Hill, 1998; Lipponen & Kumpulainen, 2011; Turnbull, 2005; Wenger & Snyder, 2000). To achieve this end, teacher education courses can include aspects related to building authentic ways to plan, implement, and evaluate their teaching.

Moreover, on a continuum, when teacher candidates transfer into the profession, their actions should again be promoted through collaboration and collective agency and their self-efficacy needs to be increased (Soini et al., 2016). The key conditions that boost the resilience of a teacher at the face of obstacles, are, hence, to be reflexive and enable the development of a strong sense of agency, efficacy, and self-worth (Johnson, 2010). What is needed is to link initial teacher preparation and continuous teacher development for the agency and a restructuring of the universities and schools is necessary (Fullan, 1993). Effective in-service teacher training and learning should foster teacher agency in terms of their motivation, efficacy, and skills and this is a strong predictor for success (Soini et al., 2016) by introducing methods to ensure teachers are aware of the kinds of agentic actions to foster student and professional learning.

Previous research indicated that positive school climate and support (Beard et al., 2010; Kılınç, 2013; Krüg, 2015; Perelli, 2018; Skaggs, 2016) and effectiveness of its structure (Özdemir & Kılınç, 2014) as well as school academic optimism (Wu & Lin, 2018) were significant predictors of teacher academic optimism. Therefore, having positive administrative and collegial relationships can be cited among the important factors that impact teachers' optimism levels as well and specific care should be given to these relationships and the ways to improve them should be sought.

On another plane, fostering teacher agency also requires school leadership where teachers' self-efficacy can be promoted (Biesta & Tedder, 2007; Priestley et al., 2012; Pyhältö et al., 2015) since, despite the teachers' high agentic capacity and intention, the context may limit their implementations of agency. To fully realize their potential

as agents, teachers must be supported inside and outside the school context; a shared vision, autonomy and trust, structures to support teacher teaming, and external networks should be promoted to enable agency (Lattimer, 2012). Therefore, policymakers need to pay attention to the context and it should be altered in the best way to allow for the capacity of teachers for agency and remove the barriers that feel risky to act in (Priestley, Biesta, Philippou, & Robinson, 2015; Priestley, Biesta, & Robinson, 2013).

5.4 Recommendations for Further Research

Up to now, little empirical research has been conducted on what characterizes teachers as agents (Eteläpelto et al., 2013). This study added to the existing literature by identifying a large percentage of these characteristics. However, there still is a variance that has not been explained. It is suggested by the researcher that the investigation of further constructs that might relate to teacher agency needs to be pursued.

Priestley et al. (2012) suggest that the agency can be understood in an ecological manner. The ecological perspective implies that agency is strongly linked to the contextual factors within which agency is actualized; it is not the mere capacity of the individual but is achieved in specific transactional circumstances (Priestley et al., 2012). Especially, given the impact of context on teachers' agentic behaviors (Biesta & Tedder, 2007), it is recommended that future studies more ecologically focus on structural aspects of agency and investigate the predictive power of external and social factors (Hökkä & Vähäsantanen, 2014) such as empowerment of teachers (Anderson, 2010), administrative and policy support, collective agency (Fleming, 1998), and resources that are available to teachers (Vähäsantanen et al., 2009).

A seemingly related but not studied concept might emerge as teachers' identity since the way teachers construct their own professional selves shape their discourses and actions, it is important to identify a solid link between identity and agency is of special

importance. Moreover, teacher motivation can yet be another construct tightly connected to teacher agency as the task of teaching in the midst of obstacles requires uttermost motivation to still carry out agentic actions.

Moreover, there is also a need for qualitative longitudinal studies that can be carried out to study teacher agency across the years. Ideally, a study that can chart the development of student teachers' agency throughout their teacher education programs and then a follow-up where their progress is further examined after they pursue their profession as in-service teachers would yield fruitful results and provide a rich, in-depth perspective into the teacher agency phenomenon.

Furthermore, the study participants were sampled in clusters from secondary and high school teachers working in randomly selected schools in Ankara. Future research can address randomly selected teachers from the study population rather than the schools. Moreover, early childhood and elementary school teachers can also be studied in terms of the agentic actions they carry out while they are exercising their instruction. Finally, since the percentage of teachers from each district the data were collected from was not recorded in this study, further research studies should be careful about representativeness of the sample. Finally, since the personality inventory used in this study was a short-form and adjective-based scale, the totality of teachers' traits might not have been captured; therefore, researchers are recommended to use more elaborate versions of personality traits measurement.

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APPENDICES

A: Sample Items from Teacher Agency Scale

Yönerge: Bu maddeler öğretmenlik uygulamalarınızı anlayabilmek için tasarlanmıştır. Lütfen her bir madde için size en uygun gelen derecelendirmeyi seçiniz.

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|--|
| 1. Hazır planlar kullanmak yerine her yıl öğrenci grubumun ihtiyaçları doğrultusunda yeni planlar oluştururum. |
| 5. Derslerimi daha etkili yürütebilmek için ilgili uzmanlardan (üniversitelerden, sivil toplum kuruluşlarından, vb.) görüş alırım. |
| Öğretme/öğrenme süreçlerinde bilimsel araştırma sonuçlarını kullanırım. |
| 7. Dünyada uygulanan farklı örnekleri uygulamalarıma yansıtırım. |
| 11. Ulusal ve uluslararası projelere katılmalarında öğrencilere rehberlik ederim. |
| 17. Öğretim sürecinde kullanacağım ölçme araçlarını öğrencilerle birlikte belirlerim. |
| 18. Öğrencilerin gelişimlerini değerlendirmek için özgün ölçme araçları geliştiririm. |
| 23. Kişisel değerlendirme sonuçlarıma dayanarak öğretimim hakkında uzun ve kısa vadeli planlar yaparım. |
| 24. Öğrencilerin kendi öğrenmelerini değerlendirmelerini sağlarım. |
| 26. Ailelerin çeşitli sosyal, kültürel, sanatsal etkinliklere katılımı için organizasyonlar düzenlerim. |
| 29. Öğrencilerin ders dışı etkinliklere (tiyatro, proje sergisi, bilim şenliği gibi) katılmaları için organizasyonlar düzenlerim. |
| 32. Bilimsel kongre veya sempozyumlarda kendi çalışmalarımı sunarım. |
| 33. Yaptığım yenilikçi çalışmaları ve deneyimlerimi okuldaki meslektaşlarımla paylaşıyorum. |

B: Sample Items from Ten-Item Personality Traits Inventory

Yönerge: Aşağıdaki maddeler sizi daha iyi anlayabilmek için tasarlanmıştır. Lütfen ifadelere ne derece katıldığınızı belirtiniz.

Kendimi [.....] biri olarak görürüm.

1. yeni yaşantılara açık, karmaşık

4. kaygılı, kolaylıkla hayal kırıklığına uğrayan

6. altüst olmuş, dikkatsiz

7. dışa dönük, istekli

C: Sample Items from Academic Optimism Scale

Yönerge: Aşağıdaki maddeler uyguladığınız etkinliklerde sorun yaşamanıza neden olabilen unsurları daha iyi anlamak için tasarlanmıştır. Lütfen her bir soru için size en uygun gelen derecelendirmeyi seçiniz.

9. Derslere az ilgi gösteren öğrencileri motive etmeyi ne kadar sağlayabilirsiniz?

Yönerge: Aşağıdaki maddeler öğrencilerinizle aranızdaki ilişkiyi daha iyi anlamak için tasarlanmıştır. Lütfen her bir soru için size en uygun gelen derecelendirmeyi seçiniz.

3. Öğrencilerime güvenirim.

5. Öğrencilerime çaba harcamalarını gerektiren ödevler veririm.

D: Sample Items from Commitment to Teaching Profession Scale

Yönerge: Bu maddeler mesleğinize dair görüşlerinizi anlayabilmek için tasarlanmıştır. Lütfen her bir madde için size en uygun gelen derecelendirmeyi seçiniz.

1. Öğretmenlik mesleğini severek yapıyorum.

6. Eğer bir kez daha tercih şansım olsaydı, yine öğretmenliği seçerdim.

12. Kendi alanımdaki gelişmeleri takip etmek benim yaşamımda önceliklidir.

13. Öğrencilerimin potansiyellerini en üst seviyeye çıkarmak benim için çok önemlidir.

14. Ders dışı zamanlarda öğrencilerimle vakit geçirerek onlara yardımcı olmak benim için büyük bir zevktir.

19. Öğrencilerimin etkili öğrenmeleri için zaman ve mekân gözetmeksizin öğrencilerimle birlikte çalışırım.

20. Öğrencilerimin geleceği için elimden gelen bütün imkânları kullanırım.

E: Skewness and Kurtosis Values of Variables

	Skewness	<i>SE</i>	Kurtosis	<i>SE</i>
Openness	-.40	.104	-.438	.207
Agreeableness	-.71	.104	.166	.207
Stability	-.28	.104	-.458	.207
Conscientiousness	-1.71	.104	2.900	.207
Extraversion	-.96	.104	.510	.207
Professional adherence	-1.01	.104	.926	.207
Devotion	-.482	.104	.037	.207
Commitment to students	-1.06	.104	2.470	.207
Efficacy	-.69	.104	1.329	.207
Trust	-.56	.104	.233	.207
Academic emphasis	-.48	.104	.252	.207
Planning	-.40	.104	-.102	.207
Instruction	-.19	.104	-.044	.207
Dissemination	.31	.104	-.257	.207
Community Service	.03	.104	-.736	.207
Empowerment	-.25	.104	-.172	.207
Evaluation	-.77	.104	1.418	.207

F: Human Subjects Ethics Committee Approval for Research

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
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08 ŞUBAT 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Yrd. Doç. Dr. Yeşim Çapa AYDIN ;

Danışmanlığını yaptığınız doktora öğrencisi Gülçin GÜLMEZ' in "*Etken Öğretmen Uygulamalarının arkasında yatan faktörler: Bir yapısal eşitlik modelleme çalışması*" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2018-EGT-001** protokol numarası ile **08.02.2018 - 30.12.2018** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ayhan SOL

Üye

Prof. Dr. Ş. Halil TURAN

Başkan V

Prof. Dr. Ayhan Gürbüz DEMİR

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Doç. Dr. Zana ÇITAK

Üye

Yrd. Doç. Dr. Pınar KAYGAN

Üye

Yrd. Doç. Dr. Emre SELÇUK

Üye

G: Ministry of Education Ethics Committee Approval for Research



T.C.
ANKARA VALİLİĞİ
Milli Eğitim Müdürlüğü

0100

Sayı : 14588481-605.99-E.7038481
Konu : Araştırma İzni

06.04.2018

ORTA DOĞU TEKNİK ÜNİVERSİTESİNE
(Öğrenci İşleri Daire Başkanlığı)

- İlgi: a) MEB Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 2017/25 nolu Genelgesi.
b) 08/03/2018 Tarihli ve 54850036-300-1271 sayılı yazınız.

Üniversiteniz Eğitim Bilimleri Anabilim Dalı, Eğitim Programları ve Öğretim Doktora Programı öğrencisi Gülçin GÖLMEZ'in "**Etken Öğretmen Uygulamalarının Arkasında Yatan Faktörler: Bir Yapısal Eşitlik Modelleme Çalışması**" konulu tez çalışması kapsamında uygulama talebi Müdürlüğümüzce uygun görülmüş ve uygulamanın yapılacağı İlçe Milli Eğitim Müdürlüğüne bilgi verilmiştir.

Görüşme formunun (6 sayfa) araştırmacı tarafından uygulama yapılacak sayıda çoğaltılması ve çalışmanın bitiminde bir örneğinin (cd ortamında) Müdürlüğümüz Strateji Geliştirme (1) Şubesine gönderilmesini rica ederim.

Vefa BARDAKCI
Vali a.
Milli Eğitim Müdürü

09-04-2018-6755

Görevli Elektronik İmza
Aşlı ile Aynıdır.
06.04.2018/201.....

H: Curriculum Vitae

Gülçin Gülmez

Education	
2012 - 2019	Middle East Technical University, Ankara, Turkey Ph.D. Curriculum and Instruction
2009 - 2012	Middle East Technical University, Ankara, Turkey M.Sc. Curriculum and Instruction
2004 - 2009	Middle East Technical University, Ankara, Turkey B.Sc. Early Childhood Education

Work Experience	
2019 Spring	Middle East Technical University, Northern Cyprus Campus, Cyprus Part-time Instructor
2009 - 2018	Middle East Technical University, Ankara, Turkey Research Assistant

Research Projects	
Jan 2017 - Dec 2017	Teacher Behaviours That Build Feelings of Acceptance and Rejection in Students and Their Effect on Students' Psychological Adaptation and Learning Processes. METU Scientific Research Projects Fund: Researcher
Jan 2017 - Dec 2017	Internationalization of Higher Education in Turkey: A Case Study METU Scientific Research Projects Fund: Researcher
Jan 2016 - Dec 2018	Predictors of Teachers' Agentic Practices: Factors Defining Teacher Agency METU Scientific Research Projects Fund: Doctoral Dissertation Project
Dec 2013 - Dec 2016	GREEN: Green Environment Education European Network EU-funded Project: Researcher
Jan 2014 - Dec 2014	Faculty Members' Perceptions on Online Student Course Evaluations METU Scientific Research Projects Fund: Researcher
Jan 2012 - Dec 2013	VITA: Validation of Service-related Learning Outcomes with an IT-based Assessment and Evidencing System EU-funded Project: Researcher

Journal Articles	
2018 (ESCI)	Yavuz, O., & Gulmez, G. (2018). Preparing perform and impact ready instructional leaders for improving urban school success. <i>Research in Educational Administration & Leadership</i> , 3(1), 88-120.
2018 (TÜBİTAK ULAKBİM)	Gulmez-Dag, G. (2018). Are tomorrow's teachers ready to save lives in cases of emergency? <i>Elementary Education Online</i> , 17(3), 1662-1671.
2016 (SSCI)	Gulmez-Dag, G., & Yildirim, A. (2016). A meta-synthesis study identifying the landscapes of pre- and in-service math teachers' knowledge in the Turkish context. <i>Hacettepe University Journal of Education</i> , 31(2), 319-332. doi: 10.16986/HUJE.2015014656

Recent conference papers	
2019	Yildirim, A., Gulmez, G. , & Yılmaz-Tuzun, O. (2019, March). <i>Learning through connections: Students' experiences of sources, processes and outcomes in a networked learning environment</i> . Nordic Educational Research Association (NERA), Uppsala, Sweden.
2018	Kondakci, Y., Gulmez, G. , & Keles, E. (2018, September). <i>Country choice of students for ERASMUS exchange: Evidence from a peripheral country</i> . Paper presented at the European Conference on Educational Research (ECER), Bolzano, Italy.
2018	Gulmez, G. , Bugay-Sokmez, A., & Yildirim, A. (2018, April). <i>Öğrencilerde kabul-red algısını yaratan öğretmen davranışları ve öğrencilerin öğrenme süreçleri üzerindeki etkileri [Teacher behaviours creating acceptance-rejection feelings of students and their effect on the learning process]</i> . Paper presented at the IV. International Conference on Educational Sciences, Antalya, Turkey.
2017	Yavuz, O., & Gulmez, G. (2017, October). <i>Preparing impact ready instructional school leaders</i> . 48th Annual Conference of the Northeastern Educational Research Association (NERA), CT, USA.
2017	Akar, H., Yılmaz, E., & Gulmez-Dag, G. (2017, October). <i>A case study on stakeholders' definitions, experiences, and expectations of internationalization of higher education</i> . Paper presented at the 2nd International Higher Education Studies Conference (IHEC), Istanbul, Turkey.
2017	Capa-Aydin, Y., Cobanoglu, R., & Gulmez-Dag, G. (2017, August). <i>Student course evaluation in higher education: A qualitative inquiry into faculty perceptions</i> . Paper presented at the European Conference on Educational Research (ECER), Copenhagen, Denmark.

Other Scientific Activities	
2017	3rd European Conference for Curriculum Studies Curriculum: Theory, Policy, Practice, Stirling, UK. Listener
2017	EERA School Curriculum Innovation Doctoral Summer School Crossing boundaries: curriculum traditions meet, Stirling, UK. Participant

I: Turkish Summary / Türkçe Özet

ETKEN ÖĞRETMENLİĞİN ARKASINDA YATAN FAKTÖRLER: BİR YAPISAL EŞİTLİK MODELLEMESİ ÇALIŞMASI

Giriş

Bugün, bir öğretmenden, dünün öğretmenlerinden istenen niteliklere kıyasla daha fazla şey beklenmektedir. Darling-Hammond, Wise ve Klein'ın (1997) belirttiği gibi, tüm öğrencilere kaliteli eğitim sunmak için öğretmenlerin daha fazla bilgi ve oldukça geniş bir beceri yelpazesine sahip olması gerekmektedir. Kuşkusuz ki, iyi işleyen eğitim sistemleri, öğrencilerin ve toplumun farklı ihtiyaçlarına cevap verebilecek ve yaşamlarında bir fark yaratabilecek sürekli bir değişim yaratan, etken öğretmenlere ihtiyaç duymaktadır. Dahası, öğretmenlerin öğrencilerin yaşamlarındaki en önemli rolü ve günümüzün zorlu toplumlarında artan değeri göz önünde bulundurulduğunda bir öğretmenin bir değişim unsuru olarak hareket etmesi gerektiği düşüncesi ön plana çıkmaktadır. Güçlü bir mesleğe yönelik etken davranışların öğretmenlerin iş tatmini, refah, sağlık ve bağlılığını teşvik etmesi açısından oldukça önemlidir (Cribb ve Gewirtz, 2007; Hökkä ve Vähäsantanen, 2014). Ancak öğretmenlerin öğrenci başarısı ve toplumsal gelişim üzerindeki kabul edilen etkisine rağmen, gerçekler farklı bir hikâye anlatmaktadır. Öğretmenlerde, özellikle yeniliklerin sorumluluğunu üstlenme konusunda bir etkenlik eksikliği olduğunu gözlemlenmektedir (Pyhältö, Pietarinen ve Soini, 2012). Bununla birlikte, sürekli mesleki gelişimde yer alabilmek, yeniliklere katılmak ve öğrenci öğrenmesini teşvik edebilmek için öğretmenlerin hem sınıfta hem de topluluktaki temsilcilik duygularını sürdürmeleri ve iletmeleri gerekmektedir (Toom, Pietarinen, Soini ve Pyhältö, 2017).

Etken öğretmenlik, öğretmenlerin, kendi çalışma yaşamlarını, yapısal olarak tanımlanmış sınırlar içinde, kuvvetli ve kararlı bir şekilde yönetme gücü olarak tanımlanmaktadır (Hilferty, 2008). Diğer bir deyişle, öğretmenlerin sosyal yapıların

kısıtları ve fırsatları dahilinde “yaptıkları veya başardıkları” etkinliklerdir (Biesta ve Tedder, 2006, s. 22). Bununla birlikte öğretmenlerin etkenlikleri, sadece mesleğin doğasıyla değil, aynı zamanda öğretmenin kendi deneyimleriyle de kısıtlıdır. Bir öğretmenin etkenlik durumunun, öğretmenin profesyonel geçmişi, eğilimleri ve iş bağlamı gibi çeşitli faktörlere bağlı olarak sürekli değiştiği ve dönüştüğü bilinmektedir (Stronach, Corbin, McNamara, Stark ve Warne, 2002). Okula yeni anlamlar kazandırmanın öğretmenlerin bilgisine, yeteneklerine, mesleki inançlarına, mesleğe dair algılarına, fikirleri benimseme ve uygulama motivasyonlarına bağlı olduğu öne sürülmektedir (Pyh  lt   ve diğ  rleri, 2012). Etken   ğretmenlik kavramsal olarak bina edilmiř olmasına rağmen,   ğretmenlerin algılarına dair   alıřmalar az sayıda kalmıřtır (Pyh  lt   vd., 2012).   ğretmenlerin meslek   ilgi, yetenek ve deneyimlerinin etken davranıřlar g  stermelerini etkilediğ  ne dair kanıtlar vardır (V  h  asantanen ve ark., 2009). Bu   alıřmanın amacı da, bu kiřisel deėiřkenleri g  z   n  ne bulundurarak, kiřilik   zellikleri, akademik iyimserlik ve   ğretmenlik mesleğine baėlılık fakt  rlerini ve etken   ğretmenlik ile aralarındaki iliřkileri bir modelde test etmektir.

G  r  lebileceė  gibi durumsal ve kiřisel fakt  rler   ğretmenlerin etkenliė ini anlamlı bir řekilde etkilemektedir (Emirbayer ve Mische, 1998).   te yandan, etken   ğretmenlik ile ilgili ampirik arařtırmalar bakımından literat  rde az   alıřma y  r  t  lm  ř, etken   ğretmenliė e dair teori geliřtirme konusunda da   ok az arařtırma yapılmıřtır (Priestley ve ark., 2013). Bu nedenle bu   alıřma, etken   ğretmenliė ini   ğretmenlerin sahip olduė u kiřisel fakt  rleri (kiřilik   zellikleri, akademik iyimserlik ve   ğretmenlik mesleğine baėlılık) arasındaki iliřkiyi keřfederek etken   ğretmenliė i tanımlayan fakt  rlere ıřık tutacaktır.

řimdiye kadar yapılan   alıřmalarda etken   ğretmenliė in, kiřisel etmen, yetenek ve inan   sistemlerinden oluřtuė u ileri s  r  lm  ř (Hadar ve Banish-Weisman, 2018), bireysel fakt  rlerin olduk  a   nemli rol oynadıė ı vurgulanmıřtır (Panti  , 2017).   te yandan ilgili alan yazın, etken   ğretmenliė in boyutlarını belirlemek i  in daha fazla

araştırma yapılması gerektiğini vurgulamış ve etken öğretmenlerin eylemlerini açıklayabilecek kişisel özellikler hakkında çok az şey bilindiğini ortaya koymuştur (Bakkenes, Vermunt ve Wubbels, 2010). Bununla birlikte, çoğu araştırma, çalışma ortamlarının bağlamına odaklanmış ve etken öğretmenliğe etki eden kişisel özellikleri göz ardı etmiştir. Bir olguyu büyük veri setleri ile araştırmanın önemine rağmen, etken öğretmenlik ile ilgili çalışmaların büyük bir kısmı nitel olarak yürütülmüş, öte yandan ve nitel yöntemler kullanılarak da az sayıda araştırma yapılmıştır (Hadar ve Banish-Weisman, 2018). Bu nedenle bu çalışma, ilgili alan yazına katkıda bulunmak ve etken öğretmenliği anlayabilmek açısından oldukça önemlidir.

Yöntem

Bu çalışmanın amacı, etken öğretmenlik ile ilgili faktörler arasındaki ilişkiyi modellemektir. İncelenen değişkenler, öğretmenlerin kişilik özellikleri, akademik iyimserlik düzeyleri ve öğretmenlik mesleğine bağlılıklarıdır.

Bu nedenle, bu çalışma iki veya daha fazla değişken arasındaki ilişki derecesini tanımlamaya ve ölçmeye çalışan ilişkisel araştırma deseninde şekillendirilmiştir (Creswell, 2012). İlişkisel çalışmalar yapmak isteyen araştırmacılar, daha karmaşık bir değişkenle ilgili olduğuna inandıkları değişkenleri inceler (Fraenkel, Wallen ve Hyun, 2012). İlişki tasarımı sayesinde, önemli katkıları olan değişkenler, anlamlı olmayan veya düşük yordama etkileri tanımlandığında ilerideki araştırmalar için ilham kaynağı oluşturur ve ilgilenen olguyu daha detaylı irdeleme olanağı sağlar (Fraenkel ve ark., 2012). Bu çalışmada incelenen ilişkiler setini analiz etmek için Yapısal Eşitlik Modeli (SEM) kullanılmıştır.

Çalışmayı şekillendiren araştırma sorusu ise “Etken öğretmenlik, kişilik özellikleri, akademik iyimserlik ve öğretmenlik mesleğine bağlılık değişkenleri tarafından doğrudan ve dolaylı etkilerini içeren model tarafından ne ölçüde yordanmaktadır?” şeklindedir.

Pilot çalışmanın örneklemi, Ankara'da devlet okullarında ve özel okullarda çalışan öğretmenlerden oluşmaktadır. Fizibilite nedeniyle kolay ulaşılabilir durum örnekleme prosedürü kullanılmıştır. Veriler, okullarda öğretmenlerle yüz yüze irtibata geçilerek toplanmıştır. Veri toplama sürecinde toplam 200 öğretmene ulaşılmıştır. Tablo 1 katılımcıların özelliklerini sunmaktadır.

Tablo 1

Pilot Çalışma Katılımcılarının Özellikleri

Değişken	<i>f</i>	%	<i>M (SD)</i>
Cinsiyet			
Kadın	136	70	
Erkek	58	30	
Okul türü			
Devler	99	50	
Özel	101	50	
Branş			
Dil	58	32	
Sosyal bilimler	32	19	
Matematik ve Fen bilimleri	56	31	
Güzel sanatlar	22	12	
Mesleki eğitim	11	6	
Mezun olunan fakülte			
Eğitim Fakültesi	101	52	
Diğer	92	48	
Yüksek öğrenim			
Lisans	125	65	
Yüksek lisans	65	34	
Doktora	3	1	
Yabancı dil			
Yok	69	35	
1 ve daha fazla	128	65	
Toplam öğrenci sayısı			195.09 (173.34)
Haftalık ders saati			29.77 (44.72)
Öğretmenlik deneyimi (yıl)			13.91 (7.90)

Ana çalışmanın örneklemi, Ankara'nın belli ilçelerinde devlet okullarında çalışan öğretmenlerden oluşmaktadır. Araştırmaya Altındağ, Beypazarı, Çankaya, Etimesgut, Gölbaşı, Haymana, Keçiören, Mamak, Polatlı, Pursaklar, Sincan ve

Yenimahalle ilçelerinde rastgele seçilen okullarda çalışan toplam 577 öğretmen katılmıştır. Tablo 2, ana çalışmada katılımcıların özelliklerini göstermektedir.

Tablo 2

Ana Çalışma Katılımcılarının Özellikleri

Değişken	<i>f</i>	%	<i>M (SD)</i>
Cinsiyet			
Kadın	423	74	
Erkek	146	26	
School level			
Ortaokul	249	44	
Lise	312	56	
Branş			
Dil	127	28	
Sosyal bilimler	67	15	
Matematik ve Fen bilimleri	134	30	
Güzel sanatlar	76	17	
Mesleki eğitim	48	10	
Mezun olunan fakülte			
Eğitim Fakültesi	343	60	
Diğer	225	40	
Yüksek öğrenim			
Lisans	385	74	
Yüksek lisans	117	24	
Doktora	10	0.2	
Yabancı dil			
Yok	152	29	
1 ve daha fazla	375	71	
Toplam öğrenci sayısı			171.56 (173.29)
Haftalık ders saati			22.67 (11.53)
Öğretmenlik deneyimi (yıl)			17.06 (10.60)

Çalışmanın verileri araştırmacı tarafından geliştirilen Etken Öğretmenlik Ölçeği, araştırmacı tarafından Türkçe'ye uyarlanan Akademik İyimserlik Ölçeği Öğretmen Formu-Lise Öğretmenleri (Fahy, Wu ve Hoy, 2010), On maddelik Kişilik Özellikleri Ölçeği (Gosling, Rentfrow ve Swann, 2003) ve Öğretmenlik Mesleğine Bağlılık Ölçeği (Kozikoğlu, 2016) kullanılarak toplanmıştır. Etken Öğretmenlik Ölçeğinin (1) öğretimin planlaması, (2) öğretimin uygulaması, (3) topluma hizmet, (4) öğrencilerin güçlendirilmesi, (5) öğretimin ve öğrencilerin değerlendirmesi ve (6) uygulamaların yaygınlaştırılması olmak üzere altı alt boyutu vardır. Akademik İyimserlik Ölçeğinin

öz-yeterlik, öğrencilere ve ailelerine güven ve akademik vurgu olmak üzere üç boyutu vardır. On maddelik Kişilik Özellikleri Ölçeği beş faktörden oluşmakta ve şu boyutları içermektedir: (1) dışadönüklük, (2) deneyime açıklık, (3) yumuşak başlılık, (4) sorumluluk ve (5) duygusal dengesizlik/nevrotizm. Son olarak Öğretmenlik Mesleğine Bağlılık Ölçeğinin (1) özverili çalışma, (2) mesleğe bağlılık ve (3) öğrencilere adanma olmak üzere üçlü faktör yapısı bulunmaktadır.

Bulgular

Bu çalışma, etken öğretmenlik ile öğretmenlerin kişilik özellikleri, öğretmenlik mesleğine bağlılık ve akademik iyimserlik değişkenleri arasındaki ilişkiyi ortaya koymak üzere bir Yapısal Eşitlik Modeli test etmiştir. Sonuçlar veriler ve test edilen model arasında örtüşme olduğunu göstermiştir. Sonuçlar öğretmenlerin akademik iyimserlik düzeylerinin ve öğretmenlik mesleğine bağlılıklarının, etken öğretmenliğini yordayan anlamlı faktörler olduğunu ortaya koyarken, kişilik özelliklerinin etken öğretmenlik üzerinde doğrudan anlamlı etkisinin olmadığını göstermiştir. Öte yandan, kişilik özelliklerinin etken öğretmenlik üzerinde akademik iyimserlik üzerinden anlamlı bir dolaylı etkisi bulunmuştur. Kişilik özelliklerinin aynı zamanda, akademik iyimserlik üzerinden öğretmenlik mesleğine bağlılık üzerinde de anlamlı bir dolaylı etkisi bulunmaktadır. Buna ek olarak, akademik iyimserlik, öğretmenlik mesleğine adanmışlık üzerinden etken öğretmenlik üzerinde dolaylı bir etkiye sahiptir. Akademik iyimserlik, yüzde otuz oranında açıklanırken, öğretmenlik mesleğine bağlılık yüzde kırk 'oranında açıklanmıştır. Model, totalde etken öğretmenliğe ait varyansın yüzde elli beşini açıklamıştır.

Tartışma

Bu araştırmanın bulguları, karmaşık bir kavram olan etken öğretmenliğin literatürle tutarlı bir yapısının olduğunu ortaya koymuştur. Alan yazın, öğretmenlerin etkenliğinin çok yönlü bir yapısının olduğunu belirtmektedir. Bu çalışmada da etken

öğretmenliğin, öğretim planlanması ve uygulaması, topluma hizmet, iyi uygulamaların yaygınlaştırılması, öğrencilerin ve öğretiminin değerlendirilmesi ile öğrencilerin güçlendirilmesini içeren karmaşık bir dizi eylemden oluştuğu doğrulanmıştır.

Etken öğretmenlik, etkili öğrenme durumları oluşturmak için sınıf koşullarını iyileştirme çabalarıyla ilgili bileşenlerden oluşmaktadır (Pyhältö, Pietarinen ve Soini, 2015; Soini, Pietarinen ve Pyhältö, 2016). Etken öğretmenlerin motivasyon, öz-yeterlik ve yetenekleri gibi faktörlerle ilişkili olduğu bulunmuş ve öğretmenlerin gösterdikleri çabanın seviyesini etkilediği vurgulanmıştır (Soini ve ark., 2016). Bu tez çalışmasının sonuçları, etken öğretmenliğin gerçekten çok yönlü bir yapısının olduğunu ve karmaşık etkileşimler dizisinden oluştuğunu doğrulamıştır. Bu araştırmada etken öğretmenliğin öğretmenlerin akademik iyimserliği ve öğretmenlik mesleğine bağlılıkları ile doğrudan ilişkili olduğu ve yapının kişilik özellikleri ile dolaylı olarak bağlantılı olduğu ortaya çıkmıştır.

Öncelikle, bu çalışmada, öğretmenlerin akademik iyimserlik düzeyi öğretmenlerin etkenliğini önemli ölçüde ve olumlu yönde yordamıştır. Akademik iyimserlik, öğretmenlerin öz-yeterlik inançları, ailelere ve öğrencilere duydukları güven ve öğretmenlerin öğrencilerin akademik öğrenmelerine yapılan vurgudan oluşmaktadır (Woolfolk Hoy, Hoy ve Kurz, 2008). Çalışmanın sözü geçen sonucu, öğretmenlerin öz-yeterlik seviyeleri yüksek olduğunda, ailelere ve öğrencilere güven duyduklarında ve akademik başarıya daha çok vurguyu yaptıklarında, sergiledikleri etken öğretmenlik davranışlarının arttığını göstermiştir. Bu nedenle etken öğretmenliğe sağlam bir temel sağlamak için öğretmenlerin öz-yeterlik seviyelerinin yüksek olması önemlidir. Sağlam dayanağı olan eylemlerde bulunmak için gerekli kapasiteye sahip olduklarında, etken öğretmenliğin gerekliliklerini yetki alanlarından şüphelenmeden yerine getirebilirler. Ayrıca, öğrenci ve ailelerin, öğretmenlerin gerçekleştirdikleri etkinliklerde onlara destek sağlama kapasitelerine güvendiklerinde ve öğrencilerin akademik öğrenmelerine önem verdiklerinde, etken öğretmenlik yönünde girişimler

yapar, öğrenci ve toplum öğrenmesini destekleme konusunda daha güçlü hissederler. Yani, öğrencilerini daha iyisini başarmaları için zorladıklarında, onların öğrenmelerini desteklemek için daha cesur davranışlarda bulunurlar. Daha önce yapılan araştırmalar da, öğretmenlerin etken öğretmenlik kapasitelerinin kendi öz yeterlik duygularına (Hadar ve Banish-Weisman, 2018; Soini ve diğerleri, 2016) ve profesyonel benliklere (Vähäsantanen, Saarinen ve Eteläpelto, 2009) bağlı olduğunu göstermiştir. Bu nedenle, öğretmen akademik iyimserliğinin, öğretmenlerin etken öğretmenliğini tanımlayan önemli bir faktör olduğu ve öğretmenlerin öğrenci öğrenmesini ve toplumsal öğrenmeyi daha iyi hale getirmek için önlemler alması ve desteklenmesi bakımından yüksek önem arz ettiği söylenebilir.

Öğretmenlik mesleğine olan bağlılık açısından değerlendirmek gerekirse, öğretmenlerin öğretmenlik mesleğine bağlı hissettiklerinde daha fazla etken öğretmenlik davranışı sergiledikleri görülmüştür. Bu çalışmada, öğretmenler öğrencilere kendini adanmış hissediyorlarsa, onların öğrenmelerini yaratıcı ve etken yollarla desteklemek için daha fazla eylemde bulunmak istedikleri gerçeği ortaya konmuştur. Adanmış öğretmenlerin öğretmenlik mesleğini daha çok takdir ettiği, öğretimlerinin kalitesini artırmak için daha fazla çaba sarf ettikleri ve öğrencilerin gelişimine daha fazla önem verdikleri görülmüştür. Bir öğretmen, öğretmenlik mesleğine daha bağlı olduğunda, öğrenciler öğrenme ve öğretim faaliyetlerinden daha fazla yararlanabilir zira etken öğretmenler öğrencilerin başarılarını arttırmak için daha etken görevler sergilemektedir. Bu bulgu, öğretmenlerin mesleklerine değer verdiğinde, öğrencilere en iyi hizmeti sunmak için harekete geçtikleri (Gratch, 2000) ve bu yönde etken uygulamalar yürüttüğü literatür tarafından da doğrulanmıştır. Paralel biçimde, Soini ve diğerleri (2016) öğretmenlerin gerekli kapasite be yeteneklerinin olmasına rağmen, eğer motivasyondan yoksunlarsa, etken öğretmenlik yapma yönünde hareket etmelerinin olası olmadığını belirtmişlerdir. Bu nedenle, öğretmenlerin bağlılık duygularını desteklemek ve öğrencilerin ve mesleğinin iyileştirilmesine önem vermelerini sağlamak, böylece eğitimlerini daha iyi yapmak

iin etken eylemlerde bulunmak iin aba gstermekten sorumlu hissetmelerini saėlamak iin olduka nemlidir.

Kiřilik zellikleri sz konusu olduėunda ise, bu alıřma kiřilik zelliklerinin etken ėretmenlikle akademik iyimserlik zerinden dolaylı olarak iliřkili olduėunu ortaya koymuřtur. ėretmenlerin kiřilik zellikleri istikrarlı olduėunda akademik olarak da daha iyimser oldukları tespit edilmiřtir. Bu bulgu, kiřilik zelliklerinin, ėretmenlerin ėrencilere ve ailelerine gven seviyesine<, z-yeterliklerinin derecesine ve ėrencilerin akademik geliřimine verdikleri nem miktarına nemli bir řekilde etki ettiėini gstermektedir. Yani, ėretmenlerin kiřilikleri ne kadar istikrarlı olursa, akademik iyimserlik yoluyla etken eylemlerde bulunma eėilimi o denli artmaktadır. Bu bulgu, ilgili alan yazın ile de desteklenmektedir. Gkler ve Tařtan (2018), Beř Faktrl kiřilik zelliklerinin okul akademik iyimserliėinin yzde on altı oranındaki bir varyansı aıkladıėını ve aralarında anlamlı bir korelasyon gsterdiėini bulmuřtur. Bu arařtırmada ise, ėretmen akademik iyimserliėi Byk Beř kiřilik zellikleri tarafından yzde otuz oranında aıklanmıřtır.

Bunlara ek olarak bu alıřmanın bulguları, ėretmenlerin akademik iyimserliėi ile ėretmenlik mesleėine olan baėlılıkları arasında kuvvetli ve anlamlı bir iliřki olduėunu ortaya koymuřtur. ėretmenlerin z-yeterlik dzeyleri yksek olduėunda, ailelere ve ėrencilere gvenebildiklerinde ve ėrencilerin akademik bařarısına vurgu yaptıklarında, ėretmeye kendilerini daha fazla adanmıř hissetmektedirler. Bu sonular, iki yapı arasında da anlamlı bir iliřki olduėunu ortaya koyan nceki arařtırmalarla paraleldir (Anwar, 2016; Kurz, 2006; Kurz, Woolfolk Hoy, & Hoy, 2007). Diėer arařtırmalar da, akademik iyimserliėin farklı boyutları ile mesleėe adanmıřlık arasında anlamlı bir iliřki olduėunu ve z-yeterlik (Chesnut & Burley, 2015; Moehle, 2011), ėretmenlerin mesleėi bırakma niyeti (Billingsley, 1993; Klassen & Chiu, 2011), iř tatmini (Fresko, Kfir ve Nasser, 1997; Kushman, 1992; Shukla, 2014) ve ėretme motivasyonu (Erdoėan, 2013; Rots, Aelterman, Devos ve Vlerick, 2010, Sezgin ve Erdoėan, 2015), mesleki ynelim (Rots, Aelterman, Vlerick

ve Vermeulen, 2007), öğrencilerden yüksek beklentiler (Evans & Tribble, 2001; Kushman, 1992), öğretmeye dair içsel motivasyon (Chan, 2006), öğretmen tükenmişliği (Yalçın, 2013) ve işe uygun olduğunu hissetme (Bogler ve Nir, 2015) gibi değişkenlerle korelasyonunun olduğunu ortaya koymuştur. Bu nedenle, öğretmenlerin öğretim için motive olmaları ve daha az miktarda tükenmişlik ve bırakma niyetleri deneyimlemeleri için akademik olarak iyimser hissetmeleri oldukça önemlidir. Bu sayede mesleklerinden daha fazla memnuniyet alabilir, kendilerini daha profesyonel öğretmenler olarak algılayabilir ve öğrenci öğrenmesini arttırmak için daha etken eylemler sergileyebilirler.

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