



# SELF-LEADERSHIP PERCEPTION AND EMOTIONAL INTELLIGENCE AS THE PREDICTORS OF COGNITIVE FLEXIBILITY

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## Abstract

*Cognitive flexibility is one of the most important skills that school administrators should have in today's world of rapid change and transformation. This study aimed to explore whether emotional intelligence and self-leadership predicted cognitive flexibility. The study universe consisted of principals and deputy principals working in primary, secondary and upper-secondary schools affiliated with the Provincial Directorate of National Education in the center and districts of Amasya in the 2019-2020 academic year. The views of participating school administrators who voluntarily participated in the study (N=204) were analyzed in the framework of the study. Self-Leadership Questionnaire, Cognitive Flexibility Scale and Trait Emotional Intelligence Questionnaire were used as data collection tools in addition to the Personal Information Form developed by the researcher. In the analysis the data was used for the multiple regression analysis conducted to determine whether self-leadership and emotional intelligence predicted cognitive flexibility. Based on the study results, it was concluded that self-leadership and emotional intelligence together -with all their dimensions- had a predictive effect on cognitive flexibility. Based on the results of the research, it can be said that training and practices that improve administrators' emotional intelligence levels and provide them with self-leadership awareness will make an indirect contribution to cognitive flexibility skills. Based on the results of the research, it can be argued that offering training and practices that improve administrators' emotional intelligence levels and provide self-leadership awareness will make an indirect contribution to the development of their cognitive flexibility skills.*

**Keywords:** *Self-leadership; emotional intelligence; cognitive flexibility; school administrators*

## Introduction

Administration, defined as the process of compiling the necessary resources acquired to achieve organizational goals in line with the identified purposes or duties, is carried out by administrators. According to Genç (2007), an administrator is a person who has the authority to use factors of production for organizational purposes to produce goods and services, while profit and risk belong to others.

Administrators should have certain qualities for successful implementation of the administrative activity. These qualities have changed over time according to the needs of the age, bringing to fore technical qualities, human qualities, and conceptual qualities at different times. Conceptual skill is the competence of thinking, evaluating information and planning. Human skill is the ability to create synergy among staff by building positive relationships in the organization. Technical skill, on the other hand, is information and quality of thought regarding technical competence and the ability to use information communication technologies at a certain level. Although grouped in different categories, administrators of the knowledge era should have the following skills: administrative, conceptual, analytical, communication, human relations, decision-making and technical skills.

Without doubt, the effectiveness of schools, which operate to achieve educational goals and have various functions, depends on the efficiency of administration activities carried out under the coordination of school administrators. When educational organizations are addressed mechanically, the technical aspect of the work seems to be more important, while social, psychological and emotional dimensions come to the fore when they are considered from a human perspective. Developing and changing global conditions affect educational organizations as well and steer them towards change. Administrators' qualities change as well to keep up with the changes in organizations which can meet the needs of the age. When these organizations in question are educational organizations, these changes become more significant because educational organizations train the individuals who will ensure the continuity of communities and prepare them for life. Therefore, individuals should be raised as individuals who are equipped with the requirements of the age. Hence, education administrators have a specific responsibility in this regard. In addition, 21st century skills such as searching and evaluating information, solving problems, exchanging information or developing ideas in a digital context have also become important with the changes in the business world (Cansoy, 2018). World Economic Forum [WEF] identified the skills that individuals should have in the future as complex problem solving skills, analytical and critical thinking skills, innovativeness, management skills, coordination skills between individuals/units, emotional intelligence, assessment and decision-making skills, service orientation, negotiation skills and cognitive flexibility skills (Gray, 2016).

Cognitive flexibility, which refers to the ability to switch between thinking about two different concepts or to think about more than one concept at the same time (Scott, 1962), is associated with openness to discussion, tolerance towards conflict (Anderson, 1998), interpersonal communication skills (Martin & Rubin, 1994), initiative, communication self-efficacy (Anderson, 1998), problem solving, adaptation (Canas et al., 2003) and self-compassion (Martin et al., 2011), decision making (Laureiro-Martínez & Brusoni, 2018), change management (Chung et al., 2012), emotions and emotional intelligence (Lin et al., 2013; Sacharin, 2009; Yazdi et al., 2018); leadership (Balthazard et al., 2012; Good & Sharma, 2010) in connection with administrative skills. Cognition, which refers to the cognitive and internal processes that individuals perform while making sense of themselves, their behaviors, their environment and the world they live in, is a product of all the elements and functions of the brain working together (Bacanlı, 2003). Flexibility is regarded as the hallmark of human cognition and intelligent behavior (Boroditsky et al., 2010; Deak, 2003). Cognitive flexibility is the arrangement of individuals' information processing processes and strategies to adapt to unexpected and new conditions around them or to cope with new situations (Canas, 2009).

Canas (2009) stated that cognitively flexible individuals adapt their behavioral strategies according to the situation by restructuring their existing knowledge according to the new situation. When completing a complex task, individuals must recognize and adapt to the situational conditions related to the task and should be able to consider the conditions when situational conditions continue to change in the process of completing the task. Cognitive flexibility is the process of perceiving these changes and taking them into account and demonstrating the acquired information. Competence in cognitive flexibility involves developing cognitive processing strategies that allow individuals to adapt their responses to situational demands (Canas et al., 2003). According to Kashdan and Rottenberg (2010), individuals with high cognitive flexibility can adapt, fulfill situational demands by restructuring, change their perspectives, compete and balance their desires, needs and living spaces. On the other hand, administrators with high cognitive flexibility can reflect deeply on the current situation, recognize and value the perspectives of diversity and at the same time integrate this diversity into their decision processes. Administrators with high cognitive flexibility are more likely to overcome inertia by valuing diversity (Laureiro-Martínez & Brusoni, 2017). In this way, individuals create new

knowledge or tools to change behavior and find new solutions to a problem in the face of transition from one task to another, when multitasking or in the light of a new rule (Ionescu, 2012). Hence, administrative activities are taken to the leadership process, an upper segment.

In this age of rapid changes and transformations, the transformation in educational organizations will undoubtedly depend on education administrators. For this reason, education administrators are expected to lead educational organizations beyond maintaining a mechanical function. Education administrators, who need to adopt many leadership approaches, especially transformational and visionary leadership, are expected to have self-leadership skills, that is, to lead themselves. According to Manz (1986, p. 589), the concept of self-leadership is defined as “the process of motivating oneself by applying specific cognitive and behavioral strategies in order to achieve individual and organizational success, controlling one's behavior, directing by guiding oneself”. The concept in question can be expressed as a more advanced form of self-influence theory within organizational processes or as a concept related to the individual's self-guidance, management and motivation. Self-leadership also constitutes the basis of shared leadership, which is one of the leadership approaches closely related to perceptions of self-benefit. Self-leadership and shared leadership concepts, becoming more and more influential in the current era, are based on a series of continuous activities such as empowering the staff, empowering self-directed teams, providing opportunities for subordinates to lead themselves, and systematically allocating leadership qualities (Pearce & Manz, 2005, p. 133). According to Manz (2015), self-leadership is beyond the concept of management by seeking answers to “what-why-how” questions under all conditions and requires thinking that each staff is a knowledge worker. This point of view shows that self-leadership is important not only from an individual point of view but also from an organizational point of view. According to Manz (1986), self-leadership is crucial in terms of staff commitment, enthusiasm, and performance. Self-leadership process should be understood to empower workers in the new century (Anderson and Prussia, 1997).

Self-leadership consists of certain cognitive and behavioral strategies that will positively affect personal effectiveness. These strategies are behavior-focused strategies, natural reward strategies and constructive thought strategies (Anderson & Prussia, 1997; Neck & Houghton, 2006). Behavior-focused strategies include goal setting, self-observation, self-rewarding, self-punishment, and self-reminders (Türköz et al., 2012). Natural reward strategies focus on positive perceptions and experiences about the tasks that need to be accomplished (Manz, 1992), they are also related to finding favorite ways to work and achieve (Houghton & Neck, 2002). Constructive thought strategies, on the other hand, are related to the formation and development of thought patterns in desired ways (Anderson & Prussia, 1997). According to Manz (1992), this strategy constitutes the most important dimension of self-leadership because it is related to how individuals think.

Emotional intelligence is another concept that is believed to affect administrators' performance in adapting to new conditions and managing change. According to Salovey and Mayer (1990, p.189); emotional intelligence is defined as the act of observing and regulating emotion in self and others and using emotion to guide their thoughts. Emotional intelligence refers to the ability to recognize the meanings of emotions and their relationships with each other and to draw conclusions and solve problems based on emotions. Emotional intelligence is the capacity to perceive emotions, to understand the information about these emotions and to manage them (Mayer et al., 1999). Emotional intelligence competence on the other hand, highlights relevant personal trends in regards to perception, processing, regulation and the use of emotional information.

According to studies, emotional intelligence increases the level of adaptive strategies (Petrides & Funham, 2001). Experts stated that individuals with a high degree of emotional intelligence are superior in their ability to resist obstacles and remain motivated, to control

their impulses, to control their emotions and to empathize (Johnson and Indvik, 1999). While individuals organize information processing processes and strategies to the extent of their cognitive flexibility to adapt to unexpected and new conditions or to cope with the situations they encounter, they also activate their emotions because cognition and emotion are deeply intertwined, shaping human behavior together (Pessoa, 2008; Todd & Anderson, 2011). As a matter of fact, studies that draw attention to the relationship between cognitive flexibility and emotional intelligence support this claim (Asıcı & İkiz, 2015; Demirtaş, 2020; Lin et al., 2014; Yazdi et al., 2018). Both the effect of cognition and emotions on behavior and also the inclusion of structurally focusing on intrinsic motivation and cognitive processes in self-leadership concept (Manz, 1991) suggest that emotional intelligence and self-leadership concepts can predict cognitive flexibility.

### *Research Aim and Research Questions*

The requirement of managing complex organizational structures and multivariate systems is more pronounced in the age we live in and hence administrators' qualifications and skills become even more specific. Cognitive flexibility, which is among the 21st century skills, is argued to be one of the most important competencies that administrators should have in regards to managing change and ensuring transformation. In the same context, emotional intelligence and self-leadership skills can be cited among the other relevant competencies for administrators. Examination of the relevant literature shows that there is a limited number of studies on school administrators' cognitive flexibility (Stager & Leitwood, 1989), there are a larger number of studies on emotional intelligence and cognitive flexibility (Lin et al., 2013; Vásquez-Rosati et al., 2019; Yazdi et al., 2018) but there are no studies that directly address the relationship of self-leadership and cognitive flexibility. It can be argued that this study will make an important contribution to the literature by being original in the sense that it addressed cognitive flexibility in the context of school administrators and tested the predictive effect of emotional intelligence and self-leadership on cognitive flexibility. Also, this research results will guide policy makers and senior administrators in the selection and training processes of education administrators. In this context, this study aimed to determine whether emotional intelligence and self-leadership predicted cognitive flexibility. In line with this general purpose, answers were sought to the following questions.

1. Do school administrators' self-leadership perceptions significantly predict cognitive flexibility?
2. Do school administrators' emotional intelligence characteristics significantly predict cognitive flexibility?

## **Research Methodology**

### *General Background*

Relational survey model was used in this study. According to Karasar (2014), the relational survey model is a research model aiming to determine the presence or degree of interchange between two and more variables. In this study, it was aimed to determine whether emotional intelligence and self-leadership predicted cognitive flexibility. The research was conducted in the 2019-2020 academic year.

### Research Group

The research group in this study consisted of principals and deputy principals working in primary, secondary and upper-secondary schools affiliated with the Provincial Directorate of National Education in the center and districts of Amasya in the 2019-2020 academic year. The views of school administrators ( $N=204$ ) who voluntarily participated in the study were evaluated in the framework of the study. Table 1 presents the distribution of school administrators' demographic characteristic.

**Table 1**  
*Distribution of School Administrators According to Demographic Characteristics*

Demographic Characteristics	<i>f</i>	%	
Gender	Female	25	12.3
	Male	179	87.7
Age	31-40 years old	70	34.3
	41-50 years old	80	39.2
	51 -60 years old	54	26.5
Professional Seniority	1-5 years	29	14.2
	6-10 years	39	19.1
	11-15 years	41	20.1
	16-20 years	34	16.7
	21-25 years	61	29.9
	26 years or more	29	14.2
Level of Education	Undergraduate	168	82.4
	Graduate	36	17.6
Administrative Duty	Principal	125	61.3
	Deputy Principal	79	38.7
Total		204	100

Table 1 shows that 12.3% of the school administrators were females and 87.7% of them were males; 34.3% of the school administrators were between the ages of 31-40, 39.2% were between the ages of 41-50, and 26.5% were between the ages of 51-60. According to professional seniority 14.2% of the school administrators had 1-5 years of professional seniority, 19.1% had 6-10 years of professional seniority, 20.1% had 11-15 years of professional seniority, 16.7% had 21-25 years of professional seniority and 14.2% had a professional seniority of 26 years or more. In addition, 82.4% of the school administrators participating in the study had undergraduate degree and 17.6% had postgraduate degree. 61.3% the school administrators in this study worked as school principals and 38.7% worked as deputy principals.

### Data Collection Tools

Self-Leadership Questionnaire, Cognitive Flexibility Scale and Trait Emotional Intelligence Questionnaire were used as data collection tools besides the Personal Information Form prepared by the researcher.

### Self-Leadership Questionnaire

Self-Leadership Questionnaire (SLQ) developed by Anderson and Prussia (1997) and adapted into Turkish by Tabak et al. (2013) was used in the study. The scale consists of three dimensions (behavior-focused strategies, natural reward strategies and constructive thought strategies) and 29 items and the goodness of fit values obtained in the Confirmatory Factor Analysis (CFA) conducted within the scope of the validity studies were found to be  $\chi^2/SD=2.90$ , GFI=.96, NFI=.91, RMSEA=.07, IFI=.94, CFI=.94, TLI=.91, RMR=.04. Cronbach Alpha internal consistency coefficients for the reliability of the scale range between .60 and .70. The Cronbach Alpha internal consistency coefficients of the scale ranged from .74 to .84 in this study. Behavior-focused strategies dimension of the scale has five factors (“Self-goal setting”, “self-reward”, “self-punishment”, “self-observation” and “self-cueing”), natural reward strategies dimension has only one factor (“focusing thoughts on natural rewards”) and constructive thought strategies dimension has three factors (“visualizing successful performance”, “self-talk” and “evaluating beliefs and assumptions”).

### Cognitive Flexibility Scale

The Cognitive Flexibility Scale, developed by Martin and Rubin (1995) and adapted to Turkish by Çelikkaleli (2014), was used in this study. The validity and reliability studies confirmed that the scale has a one-dimensional structure consisting of 11 items and explaining 43% of the variance in the total group. For the construct validity of the Cognitive Flexibility Scale, confirmatory factor analysis was conducted to verify the one-factor structure obtained in the original form of the scale. Goodness of fit values obtained in CFA were as follows:  $\chi^2/SD=1.93$ , RMSEA=.059, NFI=.85, CFI=.92, IFI=.92, GFI=.95, AGFI=.92. The Cronbach Alpha internal consistency coefficient for the reliability of the scale was calculated as .74 and the Cronbach Alpha internal consistency coefficient in this study was calculated as .71.

### Trait Emotional Intelligence Questionnaire

Trait Emotional Intelligence Questionnaire-Short Form (TEIQUÉ-SF) was developed by Petrides and Furnham (2001) and the validity and reliability study of the Turkish version of the questionnaire was conducted by Deniz et al. (2013). The scale with 20 items has a four-dimensional structure: “Well-being”, “Self-control”, “Emotionality” and “Sociability”. The goodness of fit indices in the CFA conducted the validity study of the scale were calculated as  $\chi^2/df= 2.46$ , GFI=.95, AGFI=.92, CFI=.91, RMSEA=.056 and SRMR=.060. While the Cronbach Alpha internal consistency coefficient of the scale ranged from .66 to .72 for the sub-dimensions, it was calculated as .81 for the overall scale. In this study, the Cronbach Alpha internal consistency coefficient varied between .60 and .70 for the dimensions and it was calculated as .85 for the overall scale.

### *Data Analysis*

In the analysis the data was used for the multiple regression analysis conducted to determine whether self-leadership and emotional intelligence predicted cognitive flexibility. Before the analysis, whether the necessary assumptions were met to perform the multiple regression analysis was examined. First of all, normality values of variables were examined by taking kurtosis and skewness coefficients into account. According to Tabachnick and Fidell (2012), the distribution can be accepted as normal when the skewness and kurtosis values are between -1 and +1. Table 2 shows that the kurtosis and skewness coefficients of the variables varied between -1 and +1. Accordingly, it can be argued that the normality assumption was met in the study.

**Table 2**  
*Kurtosis and Skewness Values for the Normal Distribution of Variables*

Variables	Kurtosis	Skewness
Behavior-focused	.229	-.093
Natural reward	.227	-.089
Constructive thought	-.319	.098
Well-being	.229	-.093
Self-control	-.004	-.745
Sociability	.346	-.722
Emotionality	.236	-.692
General Emotional Intelligence	-.201	-.641
Cognitive Flexibility	.088	-.114

There should not be a high degree of correlation (multiple collinearity) between predictor (independent) variables to perform multiple regression analysis. In the study, this condition was examined by looking at the Variance Inflation Factor (VIF), the correlation value of the tolerance and predictor variables among themselves. Accordingly, the VIF values of the variables were found to vary between 2.06 and 1.41. According to Allison (1999), VIF values should be 2.5 and below in multiple regression analysis. In addition, having the tolerance values in the acceptable range (between, 484 and 668) and having the correlation values of the predictor variables between themselves in the range of .436 - .642 indicated that there was no multiple collinearity between the independent variables.

#### *Ethical Considerations*

Necessary legal permissions were obtained from the Provincial Directorate of National Education in order to ensure that ethical requirements were met.

#### **Research Results**

The first problem investigated whether school administrators' self-leadership perception was a significant predictor of cognitive flexibility. Table 3 provides the results of the multiple regression analysis conducted to examine whether the self-leadership perceptions of school administrators significantly predicted cognitive flexibility.

**Table 3**  
*Regression Analysis Results Regarding Cognitive Flexibility and Self-leadership Perception*

	Variable	B	Standard Error	$\beta$	t	p	Binary r	Partial r
Cognitive Flexibility	Fixed	36.440	3.391		10.747	.0001	-	-
	Behavior-focused	-.025	.066	-.030	-.382	.703	.289	-.027
	Natural reward	.662	.282	.175	2.350	.020	.377	.164
	Constructive thought	.435	.091	.396	4.764	.0001	.473	.319
	R=0.495	R <sup>2</sup> =0.245	F=21.635	p=.0001				

Table 3 demonstrates that school administrators' self-leadership perceptions had a significant relationship with cognitive flexibility along with the dimensions of behavior-focused strategies, natural reward strategies and constructive thought strategies ( $R=0.495$ ,  $R^2=0.245$ ). In addition, self-leadership was found to be a predictor of cognitive flexibility with all its dimensions ( $F(3-200)=21.635$ ,  $p<.001$ ). These variables together explained 24% of the change in cognitive flexibility scores. According to the standardized regression coefficients, the relative order of importance of predictor variables on cognitive flexibility was as follows: constructive thinking strategy ( $\beta=.396$ ), natural reward strategy ( $\beta=.175$ ) and behavior-focused strategy ( $\beta=-.030$ ). The significance level of the regression coefficients demonstrated that behavior-focused strategy, one of the predictive variables, was not a significant predictor of cognitive flexibility ( $p>.005$ ), while natural reward and constructive thinking strategies were significant predictors of cognitive flexibility ( $p<.001$ ,  $p<.005$ , respectively).

Based on the binary and partial correlations between self-leadership dimensions and cognitive flexibility, there was a low-level, positive relationship between behavior-focused strategies and cognitive flexibility ( $r=.289$ ). When other variables were controlled, the correlation between the two variables was ( $r=-.027$ ). Similarly, it was observed that there was a moderately positive relationship between natural reward strategy and cognitive flexibility ( $r=.377$ ) and this relationship was calculated as ( $r=.164$ ) when other variables were controlled. There was a moderately positive relationship between the constructive thought strategy and cognitive flexibility ( $r=.473$ ) and when the other two variables were controlled, this relationship was calculated as ( $r=.319$ ).

According to the regression analysis results, the regression equation for cognitive flexibility can be expressed as follows:

$$\text{Cognitive flexibility} = (0.622 \times \text{Natural reward strategies}) + (0.435 \times \text{Constructive thought strategies}) - (0.025 \times \text{Behavior-focused strategies}) + (36.440)$$

The second problem investigated whether school administrators' emotional intelligence characteristics were a significant predictor of cognitive flexibility. Table 4 provides the results of the multiple regression analysis conducted to examine whether school administrators' emotional intelligence characteristics significantly predicted cognitive flexibility.

**Table 4**  
*Regression Analysis Results Related to Cognitive Flexibility and Trait Emotional Intelligence*

	Variable	B	Standard Error	$\beta$	t	p	Binary r	Partial r
Cognitive Flexibility	Fixed	29.297	2.801		10.459	.0001		
	Well-being	.342	.107	.214	3.204	.002	.518	.222
	Self-control	.221	.109	.155	2.023	.044	.542	.142
	Sociability	.146	.102	.097	1.440	.152	.461	.102
	Emotionality	.454	.128	.272	3.558	.0001	.582	.245
	Total trait emotional intelligence	29.297	2.801	.214	10.459	.0001	.518	.222
		R=0.663	R <sup>2</sup> =0.440	F=31.136		p=.0001		

According to Table 4, there was a significant relationship between cognitive flexibility and trait emotional intelligence factors (well-being, self-control, sociability, emotionality) and general emotional intelligence exhibited by school administrators ( $R=0.663$ ,  $R^2=0.440$ ). In addition, trait emotional intelligence was seen to be a predictor of cognitive flexibility with all its dimensions ( $F(5-198)=31.136$ ,  $p<.001$ ). Together, these variables explained 44% of the change in cognitive flexibility scores. According to the standardized regression coefficients, the relative order of importance of predictor variables on cognitive flexibility was as follows: emotionality ( $\beta=.272$ ), well-being ( $\beta=.214$ ) and total trait emotional intelligence ( $\beta=.214$ ), self-control ( $\beta=.155$ ) and sociability ( $\beta=.097$ ). The significance level of the regression coefficients demonstrated that the sociability dimension, one of the predictive variables, was not a significant predictor of cognitive flexibility ( $p>.005$ ), while well-being, self-control, emotionality and total trait emotional intelligence were significant predictors of cognitive flexibility ( $p<.001$ ,  $p<.005$ , respectively).

Based on the binary and partial correlations between trait emotional intelligence dimensions and cognitive flexibility, there was a moderate positive relationship between well-being and cognitive flexibility ( $r=.518$ ) and when other variables were controlled, the correlation between the two variables was calculated as ( $r=.222$ ). There was a moderately positive relationship ( $r=.542$ ), between self-control and cognitive flexibility and this relationship was calculated to be ( $r=.142$ ) when other variables were controlled. It was observed that there was a moderately positive relationship between sociability and cognitive flexibility ( $r=.461$ ) and when the other two variables were controlled, this relationship was calculated as ( $r=.102$ ). There was a moderately positive relationship between emotionality and cognitive flexibility ( $r=.582$ ) and when the other two variables were controlled, this relationship was calculated as ( $r=.245$ ). A moderately positive relationship was found between total trait emotional intelligence and cognitive flexibility ( $r=.518$ ) and when the other two variables were controlled, this relationship was calculated as ( $r=.222$ ).

According to the regression analysis results, the regression equation for cognitive flexibility can be expressed as follows:

$$\text{Cognitive flexibility} = (0.342 \times \text{Well-being}) + (0.221 \times \text{Self-control}) + (0.146 \times \text{Sociability}) + (0.454 \times \text{Emotionality}) + (0.146 \times \text{Sociability}) + (29.297 \times \text{Total trait emotional intelligence}) + (29.297)$$

## Discussion

Changes and developments in the economic, social and political spheres and scientific research findings not only affect societies, but also force societies to transform and innovate. As social systems, organizations try to implement innovative practices to find ways to do things better and to meet expectations within and outside the organization (Özdemir & Cemaloğlu, 2000). The changes and developments that take place in all organizations require that educational organizations transform themselves as well. In educational organizations, the individuals who will provide this transformation according to the requirements of the age, contribute to the renewal of the organization by developing and lead this process are “education administrators”. The digital transformation, which is taking place in line with scientific and technological developments, requires examining education administrators’ and all administrators’ skills and characteristics from various aspects. In this context, it can be argued that cognitive flexibility is one of the most important skills for education administrators. Cognitive flexibility, expressed as an important ability that helps people pursue complexity such as multitasking and finding new, adaptable solutions to changing demands (Ionescu, 2012), includes complex high-level cognitive processes and helps individuals adapt to their environment and different settings, perceive options and possibilities and make them feel competent (Kardeş, 2016).

Based on the results of the research, school administrators' self-leadership perceptions showed a significant relationship with cognitive flexibility along with the dimensions of behavior-focused strategies, natural reward strategies and constructive thought strategies. It was observed that self-leadership was a significant predictor of cognitive flexibility with all its dimensions. It can be argued that the strongest predictor of cognitive flexibility was the constructive thought strategy of self-leadership, followed by the natural reward strategy and behavior-focused strategy. Constructive thought strategies are structured on individuals’ ability to control and manage their own mental models (Manz, 1986, p. 590) and also include the creation and maintenance of a functional model of habitual ways of thinking (Neck & Houghton, 2006, p. 272). Natural reward strategies, on the other hand, refer to seeing the more pleasurable and pleasant aspects of a given job or an activity and focusing on the points that can actually be regarded as rewards for the individual (Neck & Manz, 1999, p. 43). They are used to create a performance-enhancing effect in the daily life and work-oriented behaviors of staff and to create competence and determination to work to succeed (Doğan & Şahin, 2008). Behavior-focused strategies are defined as the strategies used by individuals to ensure that their behaviors and attitudes are more effective (Manz & Sims, 2001, p. 23).

Cognitive flexibility is a multi-component process, usually defined as the accumulation of abilities such as the ability to shift attention, the ability to adapt to changing response rules or the ability to shift cognitive set to perceive, process, or respond to situations in different ways (Eslinger & Grattan, 1993). In other words, it is defined as the ability to adapt the cognitive processing strategies to encounter new and unexpected conditions in the environment (Canas et al., 2003). In short, cognitive flexibility, as a basic premise, is the change of cognitive set according to situational conditions or the restructuring and adaptation of cognitive set to changing conditions to interpret conditions (Canas et al., 2006).

Deak (2003) explains cognitive flexibility as adapting cognitions in the face of expected or unexpected situations and organizing and combining knowledge, concepts and behaviors creatively to produce new actions and expressions. In other words, cognitive flexibility refers to cognitions that can be arranged according to the demands offered by the environment. In addition, cognitive flexibility is considered to be a high level skill because it is associated with the control of many factors such as time, space and context when faced with situations (Masley et al., 2009). Self-leadership, which means that individuals themselves are the source of self-motivation and self-direction (Manz & Sims, 2001, p. 23), includes the skills of self-

influence, cognition and activation skills and it can be learned (Manz & Sims, 2001, p. 30; Pearce & Manz, 2005, p. 133). For individuals with cognitive flexibility, characteristics such as displaying harmonious and positive attitudes (Diril, 2011), being careful, analytical, and open to changes (Jonassen & Grabowski, 2012), undertaking more than one task simultaneously (Spiro & Jehng, 1990), having the ability to make use of clues in case of sudden situations (Çuhadaroğlu, 2011) can be activated by constructive thought and natural reward strategies of self-leadership, specifically.

The basic idea underlying self-leadership is that people can see their own behaviors, make judgments about them, and then change the actions they do not want (Neck, 1996, p. 203). Self-leadership model based on self-management, self-regulation, self-control and similar concepts (Manz, 1986, p. 595; Pearce & Manz, 2005, p. 133) includes taking the motivating power from the self to reach the challenging goals that an individual will set and the ability to manage the self with discipline (Manz, 1986, p. 595; Pearce & Manz, 2005, p. 133). Similarly, cognitive flexibility can be explained as the awareness of all the options related to the current situation and as talents, skills and high regulatory power, which includes self-efficacy, in the willingness and flexibility to regulate cognitions in a harmonious way (Colzato et al., 2009; Masley et al., 2009). In this context, it is possible to say that the research results showing that self-leadership predicts cognitive flexibility are also supported by the literature.

The study also determined that school administrators' emotional intelligence traits had a significant relationship with cognitive flexibility along with the dimensions of well-being, self-control, sociability, emotionality, and general emotional intelligence. In addition, it was identified that emotional intelligence traits, together with all dimensions, were a predictor of cognitive flexibility. The most powerful predictor of cognitive flexibility was found to be the emotionality dimension, followed by well-being and total emotional intelligence, self-control and sociability. Among these dimensions, all dimensions except sociability had a significant predictive effect on cognitive flexibility, while the predictive value of the sociability dimension was not found to be significant. This may be related to the fact that while cognitive flexibility for the individual is expressed in a more subjective and internal manner, sociability is more related to extroversion and relational aspects.

In its lexical meaning, emotion expresses movement, and in this context, it is accepted that emotions lead to movement. Emotions enable the individual to make urgent plans to cope with life (Goleman, 2005). According to Cooper and Sawaf (1999), emotions are energy currents that activate the rising values within the individual and shape behaviors, and they affect others by expanding outward. On the other hand, Goleman (1998) defines emotions as the characteristics that enable individuals to learn by activating their learning potentials, encourage them to seek the unknown by asking questions, develop their capacity and enable them to adopt a particular attitude by putting what is learned into practice. Salovey and Mayer (1990, p. 186) define emotional intelligence as the ability to understand, express and regulate emotions and Goleman (2005, p. 32) defines emotional intelligence as the self-motivation capacity of the person to go one's own way despite the shortcomings; controlling the incentives and delaying gratification; developing empathy for the feelings and thoughts of others and regulating one's own emotions in a way that enriches one's life. Emotional intelligence has been used to express some emotional qualities. According to Goleman, intelligence consists of two capacities, rational and emotional, and these structures are in constant interaction. These capacities are effective in processing the stimulus and the behavior. The rational-emotional intelligence is balanced as emotions intensify and the emotional mind takes control, and the rational mind loses its influence. Generally, the emotional and rational minds are in balance. In their studies, Mayer and Salovey (1993) reported that emotional intelligence is a common product of cognitive and emotional systems. They argued that the cognitive system makes abstract judgments about emotions and that the emotional system increases cognitive capacity. The study conducted

by Lin et al. (2013) which drew attention to the relationship between emotion and cognition found that positive emotions provided flexibility by promoting cognition. In addition, the study conducted by Yazdi et al. (2018) reported that emotional intelligence was a predictor of cognitive flexibility. The study conducted by Vásquez-Rosati et al. (2019) emphasized that being emotional or not affected cognitive flexibility. The study conducted by Asıcı and İkiz (2015) identified positive relationships between happiness and cognitive flexibility and the study conducted by Finucane and Whiteman (2007) concluded that positive emotions did not cause cognitive expansion. Demirtaş (2020) found positive relationships between cognitive flexibility and mental well-being. Results of the studies on emotional intelligence and cognitive flexibility generally overlap with the findings of this research.

## Conclusions and Implications

The results of this research showed that self-leadership and emotional intelligence trait predicted cognitive flexibility in all dimensions. In this context, it can be argued that the development of school administrators' self-leadership perceptions and skills will make a positive contribution to their cognitive flexibility skills. In addition, based on the results of the research, it can be said that training and practices that improve administrators' emotional intelligence traits will indirectly contribute to their cognitive flexibility skills.

Cognitive flexibility, which can be considered very important for all individuals, is crucial for the administrators of educational organizations, which have an important impact on the structuring of the society. This study examined whether school administrators' self-leadership perceptions and emotional intelligence predicted their cognitive flexibility and results demonstrated that both variables had predictive effects on cognitive flexibility. In educational organizations where rapid change and transformation are experienced, it is extremely important that school administrators not only have cognitive flexibility but also have improved self-leadership skills and emotional intelligence levels to develop successful interpersonal relationships and solve the problems they encounter. In this context, it is undeniable that increasing the self-leadership, emotional intelligence and cognitive flexibility competencies of school administrators will have contributions at individual and institutional levels. In addition, it can be suggested that these competencies, which are crucial, should be included in the administrator selection criteria.

This research is limited only to school administrators working in the province of Amasya. The research can be replicated on a larger sample and on teachers. As a matter of fact, the change and transformation that the educational organizations are exposed to is as important for teachers, who are the implementers and driving force of the education-teaching process, as it is for school administrators.

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