



Is There a Relationship Between School Principals' Learning Agility and Decision-Making Styles? The Effect of Gender as a Moderating Factor

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ABSTRACT

Leaders with ever-evolving learning agility demonstrate high performance by making quick and better decisions in the face of uncertain situations. This study aimed to determine the relationship between school principals' learning agility and decision-making styles and the moderating role of gender in this relationship. The research is carried out according to the relational survey model. SPSS Process Macro software was used to examine the regulatory role. The study group for the research consists of 383 school principals and vice principals working in İstanbul. According to the findings, the highest correlation was found between learning agility and rational decision-making style. Again, the results of the research concluded that learning agility has a positive effect with an intuitive, dependent decision-making style and a negative effect with an avoidant decision-making style. In addition, the moderating role of gender was determined between learning agility and avoidant decision-making style.

Keywords:

Learning agility, decision-making styles, gender

1. Introduction

The shift in societal needs has altered the outlook of schools and their leaders. This change compels school leaders to enhance their competencies, keeping them up-to-date and enabling them to undertake challenging roles such as effective decision-making. In dynamic environments, leadership often necessitates swift decision-making, and choosing among various courses of action can present considerable challenges for a leader. Depending on their emotions, an individual's decision-making style may oscillate between being analytical, questioning, spontaneous, or procrastinating (Scott & Bruce, 1995). Comprehending the nuances of decision-making empowers us to make both individual and organizational choices that are sound (Dewberry, Juanchich, & Narendran, 2013; Mau, 1995) and also forms the essence of decision-making (Harrison, 1996). The leader's approach to decision-making can significantly influence the quality of decisions that propel the organization towards success (Wood & Highhouse, 2014). A leader's decision-making style can induce behaviors and attitudes that shape the organization's success, impacting facets like employee job satisfaction (Hariri, Monypenny & Prideaux, 2016; Olcum & Titrek, 2015); justice (Eberlin & Tatum, 2005; Eberlin & Tatum, 2008); organizational citizenship (Battal, Durmuş & Çınar, 2017); motivation (Vanlommel, Vanhoof & Van Petegem, 2016); and performance (Ceschi et al., 2017; Ghaleno, Pourshafei & Yunesi, 2015; Nygren & White, 2002; Phillips et al., 2016). Simultaneously, an individual's characteristics play a significant role in decision-making (Stanton & Roelich, 2021). The experiences of individuals (Bruine de Bruin, Parker, & Fischhoff, 2020) lead to variations in their learning styles (Sproles & Sproles, 1990), which in turn influence their decision-making styles in uncertain and risky circumstances (Stanton & Roelich, 2021; Wilson, 1971).

Managing uncertain situations is not easy. Imagining problems, approaching them, reasoning, and making appropriate decisions that will encourage organizational compliance require a certain agility (Jonier & Josephs,

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2007). Recent theoretical and empirical findings indicate that learning agility is the most important determinant of high performance and potential leaders (Bedford, 2011; De Meuse, 2019; Smith, 2015; Howard, 2017). Learning agility is the ability to learn effectively from all kinds of experiences, adapt (De Meuse, 2017; Lombardo & Eichinger, 2000), and apply quickly and flexibly to uncertain situations (DeRue, Ashford, & Myers, 2012). Leaders with learning agility follow innovations closely. It can make strategic decisions that can be solved by influencing the organization's future by taking quick meaning from developments (Tripathi & Dhir, 2022) (Jonier & Josephs, 2007). Looking at the literature, although studies on learning agility and decision-making mechanisms are at an early stage, there are many studies on the relationship between leader-learning (Brown & Posner, 2001; Hallinger & Heck, 2011; Timperley, 2011; Zhang & Brundrett, 2010) and leader-decision-making (Eberlin & Tatum, 2008; Keller & Yang, 2008; Hariri, Monypenny & Prideaux, 2016). This issue was also taken into account in schools, and the decision styles of both school principals (Andersen, 2010; Hariri, Monypenny & Prideaux, 2016; Hansson & Andersen, 2007; Olcum & Titrek, 2015; Savery, Soutar & Dyson, 1992) and teachers were tried to be determined (Vanlommel, Vanhoof & Van Petegem, 2016). Although the subject is examined from various angles, it is unclear how school principals, who exhibit an agile management style in uncertain and challenging situations, approach problematic situations and their decision-making orientations. Moreover, the role of gender in the relationship between learning agility and decision-making styles has not been questioned. In this way, while the results of the research cause us to understand the behavior of agile school principals, it provides a deep insight by taking the discussion about learning agility one step further. This research has two main objectives. The first of these is to examine the relationship between school principals' learning agility and decision styles, and the second is to determine the moderating role of gender.

1.1. Learning Agility

Lombardo and Eichinger (2000) focused on identifying the characteristics of leaders who successfully complete work in difficult situations. Researchers have developed the concept of learning agility, which takes accurate learning from experience and has the ability to quickly apply this learning to situations it encounters for the first time. Leaders with learning agility are long-term successful (Bedford, 2011; Bywater, Hezlett, Lewis & Smith, 2021) and high-performing individuals who can create a vision for the organization, evaluate feedback mechanisms well, and include employees in decision-making mechanisms (Allen, 2016; Bedford, 2011; Connolly, 2001; Lombardo & Eichinger, 2000). Learning agility is a feature related to cognitive ability (verbal reasoning, numerical reasoning, and abstract reasoning) (Allen, 2016; DeRue, Ashford, & Myers, 2012; Miller, 2018), tolerating uncertainty and behaving flexibly (Allen, 2016), and openness to experience (Laxon, 2018). It has been determined that learning agility has five distinctive characteristics, such as People Agility, Results Agility, Mental Agility, Change Agility, and self-awareness (De Meuse et al., 2011; Gravet & Chadwel, 2016; Lombardo & Eichinger, 2000). It is the people agility, which makes experiential learning and builds constructive interpersonal relationships; the results agility, which can achieve effective results by showing high performance in challenging conditions; the mental agility, which can analyze problems and develop different solutions to problems; the change agility, which is curious about new and different ideas and eager to develop new skills; and the self-awareness, which recognizes its weaknesses and strengths (De Meuse et al., 2011; Lombardo & Eichinger, 2000). Although research on learning agility in the field of education is still new, it has been found to be an important determinant of teacher performance (Howard, 2017; Yazıcı, 2020). Learning agility affects the learning culture (Saputra, Abdinagoro, & Kuncoro, 2018; Ghosh & Muduli, 2021) and increases work engagement (Jo & Hong, 2022; Saputra, Abdinagoro, & Kuncoro, 2018). It contributes to the innovative behavior of employees (Jo & Hong, 2022) and their career progress (Bedford, 2011; De Meuse, Dai, & Swisher, 2012).

1.2. Decision-making styles

The quality of the decisions that will lead the leader to success and the decision-making styles behind these decisions have long been a focus of researchers (Larson, Foster-Fishman, & Franz, 1998; Harrison, 1996; Hariri, Monypenny, & Prideaux, 2016). Decision-making style, individuals' stress level (Bavolar & Orosová, 2015), and emotions (Di Fabio & Kenny, 2012) are affected by internal situations such as depressive perception (Bavolar & Orosová, 2015; Leykin & DeRubeis, 2010). Some of the previous researchers explained decision-making based on personality (Dewberry, Juanchich, & Narendran, 2013; El Othman et al., 2020), cognitive (Hunt et al., 1989; Juanchich et al., 2016; Wang et al., 2017), and emotional intelligence (Di Fabio & Kenny,

2012). On the other hand, some researchers have stated that it is a process that concerns the whole rather than addressing a single aspect of decision-making (Thunholm, 2004). Scott and Bruce (1995) explain decision-making in terms of the style that they have previously experienced and learned in the face of decision-making by subtracting it from the narrow meaning (p. 820). According to the authors, there are four different decision-making styles. It is the rational decision-making style that explores all options and comes to a conclusion by evaluating them logically; the intuitive decision-making style influenced by emotions and instincts; the dependent decision-making style that takes into account the recommendations and opinions of others in decision-making; and the decision-making style that avoids decision-making. As a result of the analysis, a fifth style, which expresses a sense of urgency, is included in the model, which is the spontaneous decision-making style, that is, trying to complete the decision-making processes as soon as possible.

1.3. Learning Agility and Decision-Making Styles

The leaders of educational institutions are expected to find solutions to problems by taking various decisions during the day. Decisions taken in the face of uncertain and complex situations may make a difference between leaders, or they may be prone to one or more. Learning agility feeds on experiences, and leaders who are more agile are eager to gain developmental work experiences (Laxon, 2018). They create their own styles with repeated experiences (McCall, 2004). High business knowledge, shaped by their experience, causes them to develop an agile leadership understanding that will make a difference beyond their intuition (Terrell & Rosenbusch, 2013). For example, the leader's mental agility developed through experiential learning (Handayani & Ambara, 2021) may cause them to approach problems more systematically and analytically. Skills such as data collection and analysis may tend to use a rational decision-making style. Moreover, the readiness of these individuals for change (Yazıcı, 2020) and their tendency to learn innovations and be creative may affect their intuitive decision-making (Aarum Andersen, 2000). Intuitive thinking is influenced by experiences (Phillips et al., 2016). The knowledge acquired by school administrators as a result of their experiential learning can be improved by rational processes, and they can make intuitive decisions by providing deep insight (Hamilton, Shih, & Mohammed, 2016). In addition, school administrators with learning agility may turn to experiential learning and take risks without avoiding situations that will challenge them (Allen, 2016). Again, agility to achieve results and agility in human relations may cause the leader to strengthen team loyalty and create a positive climate (Bywater et al., 2021) to make dependent decisions and not to make spontaneous decisions with high self-awareness. Therefore, the following hypotheses have been developed:

H₁: There is a positive relationship between learning agility and decision-making styles.

H₂: There is a positive relationship between rational, intuitive, and dependent decision-making styles.

H₃: A negative relationship exists between learning agility, avoidance, and spontaneous decision-making styles.

1.4. Moderating Effect of Gender

The results of previous research on learning agility and gender do not show a certain consistency. In their research, Lombardo and Eichinger (2000) suggested that gender difference is not a distinctive feature in measuring learning agility. Some of the later studies reached similar results (Dai, De Meuse, & Tang, 2013; De Meuse et al., 2008; Yazıcı, 2020). Some researchers have found that there is a small difference between men and women (Allen, 2016; Harring, Shankar, & Hofkes, 2020). Although the gender factor is considered ineffective for general learning agility, the difference in decision-making styles may become more pronounced. Men and women have psychological differences. This shows that leadership styles can therefore make a difference between decision styles (Dumitriu et al., 2014). For example, men's likelihood of learning more experientially may cause their rational and intuitive decision-making styles to develop more than women's. Again, the predisposition of women to the interpersonal dependent profile (Delaney et al., 2015) may affect their dependent decision-making (Salo & Allwood, 2011). Reflecting this, risk-taking tendencies can create gender differences in avoidant and spontaneous decision-making styles. It was thought that the determination of the moderating role of gender may be important to determine the multifaceted and complex impact of the agile leader on decision-making. It is expected that gender may influence the relationship between learning agility and decision-making styles. Therefore, the following hypotheses have been developed:

- H₄= Regulates the relationship between gender, learning agility, and rational decision-making.
 H₅= Regulates the relationship between gender, learning agility, and intuitive decision-making.
 H₆= Regulates the relationship between gender, learning agility, and dependent decision-making.
 H₇= Regulates the relationship between gender, learning agility, and avoidant decision-making.
 H₈= Regulates the relationship between gender, learning agility, and instant decision-making.

2. Methods

2.1. Research Design

This study aimed to reveal the relationships between learning agility and decision-making style and determine the moderating role of gender. For this purpose, a relational screening model was used to determine the relationship between two variables. In addition, a model analyzing the regulatory role of gender in this relationship was proposed (Figure 1). While the mediator variable focuses on revealing causal effects, the moderating variable is an analysis used to determine time, situation, size, or for what kind of people it exists (Hayes, 2017). The moderating variable does not express a causal relationship between the dependent and independent variables. The relationship between the dependent and independent variables depends on the strength of the moderating variable. This moderating variable can be a categorical or continuous variable (MacKinnon, 2011).

2.2. Study Group

A simple random sampling method was used to determine the study group, and the research data were collected voluntarily. The data for the study were obtained from 383 school principals and deputy principals working in public schools in Istanbul, Turkey, in 2022. Considering the distribution of the participants, 133 (34.7%) were female, 250 (65.3%) were male, 190 (49.6%) were undergraduates, and 193 (50.4%) were graduates. In addition, 139 (36.3%) of the participants were principals, 242 (63.2%) were vice principals, and their average age was 42.96 (SD = 7.58). It was observed that 176 (46%) of the participants worked in primary school, 102 (26.6%) in secondary school, and 105 (27.4%) in secondary education institutions; 136 (35.5%) had 5 years or less of seniority, 114 (29.8%) had 6-10 years of seniority, 75 (19.6%) had 11-15 years of seniority, 32 (8.4%) had 16-20 years of seniority, and 25 (6.5%) had 21 years of seniority or more.

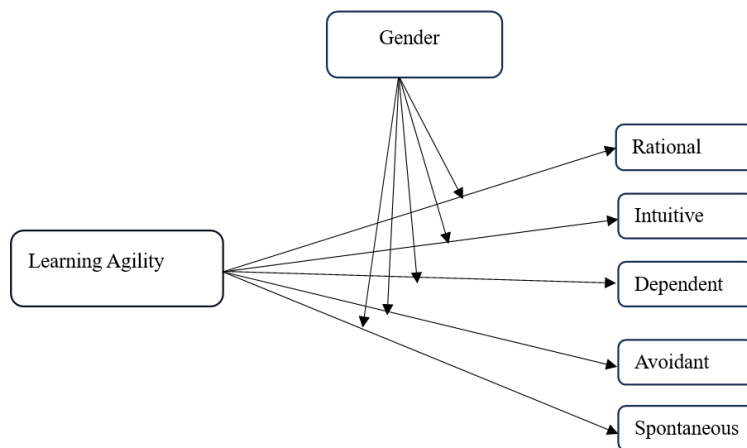


Figure 1. Moderating Model

2.3. Data Collection Tools

In order to collect data for the research, the Marmara Learning Agility Scale, Decision Making Style Scale, and personal information form were used.

Personal Information Form: This form includes the demographic characteristics of the participants, such as gender, age, education level, school type, and administrative seniority.

Marmara Learning Agility Scale: The scale developed by Yazıcı and Ozgenel (2020) consists of 30 items and 5 sub-dimensions (People Agility, Change Agility, Mental Agility, Results Agility, Self-Awareness). The Cronbach Alpha reliability coefficient of the scale was calculated at 0.94. Confirmatory factor analysis (CFA) results to examine the structure differences of the five Learning Agility are shown in Table 1.

Decision-Making Style Scale: The scale was developed by Scott and Bruce (1995) to measure decision-making styles and adapted to Turkish by Taşdelen (2002). The original form of the Decision-Making Style Scale consists of 25 items and 5 sub-dimensions (Rational, Intuitive, Dependent, Spontaneous, Instantaneous and Avoidant). During the adaptation phase to Turkish, an item in the original scale was removed from the scale, and the total number of items was reduced to 24 and $\alpha = .74$. Confirmatory factor analysis (CFA) results to examine the structure differences of the five decision-making styles are shown in Table 1.

2.4. Data Analysis

The analyses of the data were done with IBM SPSS Statistics 26 and SPSS AMOS and SPSS PROCESS Macro software. This study performed normality and correlation analyses with SPSS Statistics to determine the relationship between learning agility and decision-making style. The reliability and validity of the scales were tested with Cronbach Alpha (α), Confirmatory Factor Analysis (CFA), and correlation analyses. In Table 1, it is examined whether the variables are normally distributed and Cronbach Alpha values are given.

Table 1. Normality Values of Learning Agility and Decision-Making Styles

	N	M	sd	Skewness	Kurtosis	Cronbach Alpha (α)
Learning Agility	383	4.190	.3913	.090	-.105	.943
People Agility	383	4.363	.4567	-.325	-.511	.697
Result Agility	383	4.083	.4779	.131	-.220	.874
Mental Agility	383	4.106	.4592	.170	-.368	.855
Change Agility	383	4.149	.5139	-.061	-.197	.856
Self-Awareness	383	4.336	.4292	-.201	-.252	.832
Decision-Making Style	383	3.306	.3749	.738	1.274	.813
Rational	383	4.272	.4214	.169	-.425	.761
Intuitive	383	3.815	.6215	-.350	.348	.808
Dependent	383	3.834	.6837	-.317	-.127	.794
Avoidant	383	2.237	.7818	1.052	1.388	.849
Spontaneous	383	2.478	.7264	.579	.469	.798

As seen in Table 1, since the skewness and kurtosis values of the three variables were between -1.5 and +1.5, it can be said that they showed a normal distribution (Tabachnick & Fidell, 2015). It was determined that all variables' Cronbach Alpha (α) values were acceptable. Confirmatory Factor Analysis (CFA) was performed to determine the construct validity of the five scales after it was determined that the variables were normally distributed. Table 2 shows the fit index comparison of the variables.

Table 2. Adaptation Index Analysis Results of Variables

Variables	χ^2/df	RMR	IFI	CFI	RMSEA
LA	2.381	.020	.907	.906	.060
DMS	2.365	.056	.915	.914	.060
Rational	1.493	.009	.995	.995	.036
Intuitive	2.935	.014	.993	.993	.071
Dependent	1.886	.011	.996	.996	.048
Avoidant	1.226	.014	.999	.999	.024
Spontaneous	3.203	.019	.991	.991	.076

χ^2 = Chi-square; df=degree of freedom; $p < .01$; RMR = Root mean square residuals; IFI = Normed Fit Index; RMSEA = Root mean square error of approximation

This study determined that the confirmatory factor analysis fit values of the scale were at an acceptable level (Buhi, Goodson & Neilands, 2007; Kline, 2016; Schermelleh-Engel, Moosbrugger & Müller, 2003; Tabachnick & Fidell, 2015). Regression analysis is generally recommended by Baron and Kenny (1986) to examine the effect of the moderating variable. This approach is criticized for not giving strong statistical values and having deficiencies (MacKinnon et al., 2002; Zhao, Lynch, & Chen, 2010). Therefore, SPSS PROCESS Macro software

developed by Hayes (2017), which is a modern approach to testing research hypotheses, was used and analyzed using Model 1. The moderating effect of women and men on learning agility and decision-making styles (Rational, Intuitive, Dependent, Avoidant, and Spontaneous) was questioned. The variable was standardized, and female = 0 and male = 1 values were given for the gender variable. In addition, 5000 resampling options were preferred with the bootstrap technique.

2.5. Ethical

This study was conducted in accordance with the principles of the Declaration of Helsinki and was approved by Fatih Sultan Mehmet Vakıf University. Approval Decision No. 24.01.2022-115

3. Findings

In order to test the hypotheses, the correlation coefficients between learning agility and decision-making style were calculated first.

Table 3. Correlation Analysis Results between Learning Agility and Decision-Making Styles

	1	2	3	4	5	6	7	8
1-LA	1							
2-DMS	.188**	1						
3-RDMS	.596**	.234**	1					
4-IDMS	.356**	.621**	.289**	1				
5-DDMS	.111*	.544**	.194**	.273**	1			
6-ADMS	-.191**	.713**	-.165**	.153**	.198**	1		
7-SDMS	-.064	.634**	-.215**	.146**	.035	.506**	1	
8-Gender	.042	.036	.003	-.001	-.010	.043	.049	1

**p < .01, *p < .05, N=383

LA: Learning Agility; DMS: Decision-Making Style; RDMS: Rational Decision-Making Style; IDMS: Intuitive Decision-Making Style; DDMS: Independent Decision-Making Style ADMS: Avoidant Decision-Making Style; SDMS: Spontaneous Decision-Making Style;

Table 3 shows a significant difference between learning agility and decision-making styles ($r = .188$, $p < 0.01$). According to the results of the analysis, Hypothesis 1 was supported. Again, learning agility and rational ($r = .596$, $p < 0.01$) and intuitive ($r = .356$, $p < 0.01$) dependent decision making ($r = .111$, $p < 0.05$) were positively correlated with avoidant decision-making style ($r = -.191$, $p < 0.01$) were negatively correlated (H2 supported, H3 partially supported). The relationship between general learning agility and instant decision-making style is meaningless ($r = -.064$, $p > 0.05$). In addition, the relationship between gender variable learning agility and decision-making styles is statistically insignificant ($r = -.42$, $p > 0.05$).

In this study, the regulatory analysis method developed by Hayes (2017) was used. Based on the hypotheses, the moderating role of gender in learning agility and decision-making styles was questioned. Learning agility, rationality ($\beta = .643$ **, $p < 0.01$), and intuitive decision-making style ($\beta = .574$ **, $p < 0.01$). However, learning agility was not effective on rational and intuitive decision-making styles over the gender variable ($\beta = -.037$, $p > 0.05$; $\beta = -.296$, $p > 0.05$). Again, according to the findings, it was observed that learning agility, dependence, and spontaneous decision-making styles were not effective for gender ($\beta = .209$, $p > 0.05$; $\beta = -.210$, $p > 0.05$). According to the findings, hypotheses 4, 5, 6, and 8 were not supported. The results of the moderator analysis used to test Hypotheses 4, 5, 6, 7, and 8 are presented in Table 4.

The important finding of the research is the relationship between learning agility and avoidant decision-making styles. H7 suggests that gender moderates the relationship between learning agility and avoidant decision-making style. Learning agility predicts avoidant decision-making style ($\beta = -.370$ **, $p < 0.01$). Also, the results show that the effect of the moderator term (Learning Agility * Decision-Making Style (X.W)) on the gender variable is significant ($\beta = -.540$ *, 95% CI=[LLCI = -.961, ULCI = -.119], $t = -2.525$, $p < 0.05$). According to the results obtained, gender moderates the effect of learning agility on avoidant decision-making style (H7 was supported). The avoidant decision-making style of the variables in the model explains 5.5% of the total variance. The contribution of gender to learning agility and avoidant decision-making style is 1.6%.

Table 4. Analysis Results To Determine The Effect of Gender on Learning Agility and Decision-Making Styles and The Moderator Role of Gender

Variables	B	SE	t	RATIONAL (Y)	
				LLCI	ULCI
Constant	4.272	.017	246.016	4.238	4.307
LA (X)	.643**	.044	14.465	.556	.731
Gender(W)	-.019	.036	-.539	-.091	.052
X.W	-.037	.095	-.394	-.224	.149
R ²				.355	
ΔR ²				.000	
INTUITIVE (Y)					
Constant	3.818	.029	128.598	3.759	3.876
LA (X)	.574**	.076	7.553	.425	.724
Gender(W)	-.024	.062	-.389	-.147	.098
X.W	-.296	.162	-1.823	-.617	.023
R ²				.134	
ΔR ²				.000	
DEPENDENT (Y)					
Constant	3.832	.034	110.029	3.764	3.901
LA (X)	.189*	.089	2.125	.014	.365
Gender(W)	-.019	.073	-.264	-.163	.124
X.W	.209	.191	1.094	-.166	.584
R ²				.015	
ΔR ²				.003	
AVOIDANT (Y)					
Constant	2.241	.039	57.426	2.164	2.318
LA (X)	-.370**	.100	-3.704	-.567	-.173
Gender(W)	.077	.082	.947	-.083	.239
X.W	-.540*	.214	-2.525	-.961	-.119
R ²				.055	
ΔR ²				.016	
SPONTANEOUS (Y)					
Constant	2.480	.037	66.806	2.407	2.553
LA (X)	-.116	.095	-1.224	-.303	.070
Gender(W)	.075	.078	.970	-.077	.229
X.W	-.210	.203	-1.032	-.610	.190
R ²				.009	
ΔR ²				.002	

* p<0.05, ** p<0.01, ID: Learning Agility, LLCI: Bootstrap confidence interval, ULCI: Bootstrap confidence interval upper limit

Situational effects on learning agility and avoidant decision-making style by gender are given in Table 5. When Table 5 is examined,

Table 5. Situational Effects on Learning Agility and Avoidant Decision-Making Style by Gender

Gender	B	SE	t	LLCI	ULCI
Female	-.017	.176	-.100	-.364	.329
Male	-.558*	.121	-4.609	-.796	-.320

* p<0.05, ** p<0.01, ID: Learning Agility, LLCI: Bootstrap confidence interval, ULCI: Bootstrap confidence interval upper limit

The moderating effect of gender between learning agility and avoidant decision-making style is insignificant for women ($\beta = -.017, p > 0.05$), and it can be said to be statistically significant for men ($\beta = -.558, 95\% CI = [LLCI = -.796, ULCI = -.320], t = -4.609, p < 0.05$). It was created to better understand this interaction and is presented in Figure 2.

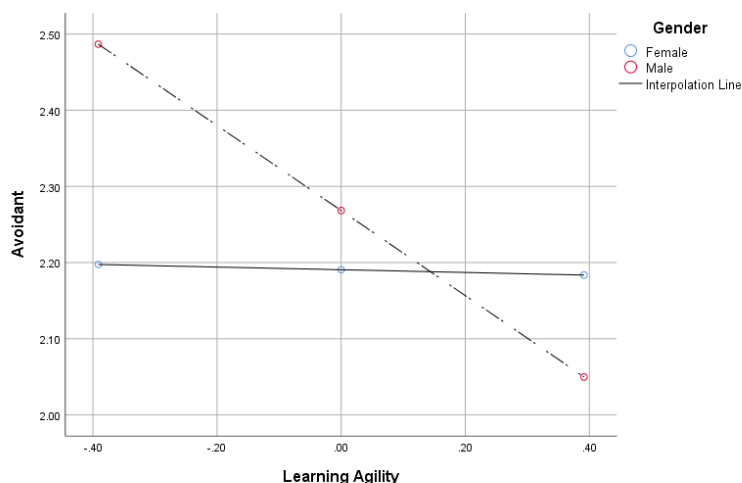


Figure 2. *The Moderator Relationship in The Effect Between Gender, Learning Agility, and Avoidant Decision Style*

When Figure 2 is examined, there is no effect between women's learning agility and avoidant decision-making styles. In addition, when men's learning agility increases, it is seen that the effect of avoidant decision-making styles increases negatively. In other words, it can be concluded that men's learning agility regulates its effect on their avoidant decision-making style.

4. Discussion and Conclusion

This study aimed to identify the relationships between the learning agility of school principals and their decision-making styles. The findings of the research shed light on the approaches used for decision-making and their execution, aspects that were earlier veiled in the correlation between learning agility and elevated performance (Yazıcı, 2020). Concurrently, this research aimed to measure the influence of gender as a moderating factor on the effect of learning agility on decision-making style, thereby enhancing the current body of knowledge.

The analysis results identified a positive relationship between learning agility and decision-making styles. Moreover, it was determined that school principals possessing learning agility primarily employ a rational decision-making style. Some studies have shown that school principals use a rational decision-making style more than other decision-making styles (Olcum & Titrek, 2015; Akyurek & Guney, 2018). Again, Ozgenel (2018) found in his study that school administrators tend to make rational decisions when they develop the skills of organizing information, impartial evaluation, and creative thinking in the face of uncertainty. Previous research indicates that individual characteristics characterizing learning agility predict rational style. For example, according to research results, individuals who are agile, innovative, and flexible thinkers in the face of challenging situations (Palmiero et al., 2020) and who benefit from their experiences (Ghaleno, Pourshafei, & Yunesi, 2015; Phillips et al., 1984) prefer a rational decision-making style. Considering that most decisions are made under uncertainty and with limited information, the leader's motivation level, emotion regulation skills, and experiences play an important role in making wise choices (Bruine de Bruin, Parker, & Fischhoff, 2020). Leaders with learning agility are motivated to succeed without prejudice or influence (Bouland-van Dam, Oostrom, & Jansen, 2022), which leads them to make quick and rational decisions (Vanlommel, Vanhoof, & Van Petegem, 2016). In addition, abstract reasoning and verbal reasoning skills are important elements of learning agility. These skills enable logical thinking by making sense of complex situations and integrating old and new knowledge instead of adhering to established beliefs (Miller, 2018). This situation can be said to lead leaders with learning agility to a rational decision style by making logical evaluations against alternative situations.

Research findings revealed a positive correlation between learning agility and rational, intuitive, and dependent decision-making styles, while a negative correlation was observed with avoidant decision-making styles. Additionally, the relationship between learning agility and spontaneous decision-making style was found to be insignificant. Agile leaders predominantly employ intuitive and rational decision-making styles.

Hansson and Andersen (2007) discovered in their research that school principals who adapt to change easily tend to be intuitive in their decision-making processes. Leaders may need to anticipate novel situations that could pose challenges in order to manage complexity and swiftly respond to change. Agile leaders derive practical insights from their experiences (Allen, 2016; Laxon, 2018; Miley, 2020) and develop intuition (Hallenbeck, 2016), which could be why they rely on intuition in novel situations. However, it could be suggested that learning-oriented individuals can surmount difficult tasks without avoidance (Allen, 2016; Jo & Hong, 2022.), and make decisions without evading flexible thinking skills about experiences (DeRue, Ashford & Myers, 2012; Sung, 2021) in order to move swiftly. Furthermore, leaders' learning agility contributes to healthy interpersonal relationships, rapid short-term results, commitment from teams within the organization, and a positive climate (Bywater et al., 2021). Moreover, principals with learning agility tend towards harmonious work and cooperation (Burke, 2017) and encourage teachers to express themselves better (Yazıcı et al., 2022). This could be related to the school's practice of considering all stakeholder opinions and adopting a dependent decision-making style that entails opinion consultation.

Another significant finding of the research is the moderating role of gender in the relationship between the learning agility and decision-making styles of school principals. According to the findings, it has been identified that there is a moderating role of gender in the avoidant decision style of school principals with learning agility. Gender has a determinant role in the relationship between leadership and decision-making style (Park, 1996). The literature on decision-making anticipates that individuals under stress can make avoidant (Thunholm, 2008) and dependent decisions (Allwood & Salo, 2012). However, the findings suggest that agile school principals who learn quickly make decisive decisions when under stress to make important choices. One of the main features of agile leaders is their ability to manage stressful situations by tolerating uncertainty (Allen, 2016). It can be stated that men, with these aspects, appear calm and resilient in the face of stressful situations. Furthermore, men's mental and physical agility cause them to learn quickly. This situation could lead them to successfully complete uncertain and complex tasks (Haring, Shankar, & Hofkes, 2016). In addition, it has been determined that men are more agile than women in the face of change, where uncertainty is intensely experienced (De Meuse et al., 2011). The results of the study indicate that agile male school principals tend to make prompt and intelligent decisions without shirking responsibility or delaying on crucial issues. Interpreting these results, it is hypothesized that male leaders possessing learning agility demonstrate a higher propensity for risk-taking in their decisions as compared to their female counterparts.

Many studies to date have focused on individual differences affecting decision-making styles. In this study, the effect of learning agility, which is a leadership skill, on decision styles is included, and the discussions are expanded. Leaders with learning agility use a high level of rational decision-making style. In addition, they use an intuitive and dependent decision-making style, albeit at a low level. Individuals who use a rational style in their decisions do not act with an indecisive attitude when faced with important problems (Curşeu & Schrujijer, 2012). Research results support this view. The ability of principals to learn agility to learn more about the problem, willingness to learn, and quick adaptation skills determined that agile leaders make decisions without avoiding. Again, in line with the findings of the study, the moderating effect of gender was investigated. The moderating effect was found only on the avoidant decision-making style. According to the results, agile male leaders are more prone to taking more risks, going over events, and making decisions without avoidance. No gender-specific effect was found in other decision styles. This suggests that leaders with high-performance learning agility tend to make decisions in a similar way. Additional research is needed to better understand the effects of learning agility.

5. Limitations and Recommendations

While the results of the research present significant findings, they also have certain limitations. The first one is the cross-sectional nature of the study. While the research findings explain the majority of the hypotheses, they could be explained differently with a longitudinal research design. Thus, the effects of learning agility on decision-making styles can be observed more over time. The second limitation is that the research data was collected from school principals working in Istanbul, Turkey. Despite the expectation that the findings would be compatible with those of other countries, factors in organizational structure can cause differences in decision-making styles (Yousef, 1998). Moreover, the moderating effect of gender on learning agility and avoidant decision styles may yield different results in different cultures. Hence, it is believed that repeating

this research conducted on school principals with different organizational structures and samples will help extend the research findings.

6. References

- Aarum Andersen, J. (2000). Intuition in managers: Are intuitive managers more effective?. *Journal of Managerial Psychology*, 15(1), 46-63. <https://doi.org/10.1108/02683940010305298>
- Akyürek, S., & Guney, S. (2018). Effects of learning styles and locus of control on the decision-making styles of leader managers. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(6), 2317-2328. <https://doi.org/10.29333/ejmste/89515>
- Allen, J. (2016). *Conceptualizing learning agility and investigating its nomological network* [Doctoral dissertation]. Florida International University.
- Allwood, C. M., & Salo, I. (2012). Decision-making styles and stress. *International Journal of Stress Management*, 19(1), 34-47. <https://doi.org/10.1037/a0027420>
- Andersen, J. A. (2010). Public versus private managers: How public and private managers differ in leadership behavior. *Public Administration Review*, 70(1), 131-141. <https://doi.org/10.1111/j.1540-6210.2009.02117.x>
- Battal, F., Durmuş, İ., & Çınar, E. (2017). The effects of organizational citizenship behaviors and decision-making styles on transformational leadership behavior. *Electronic Turkish Studies*, 12(31), 1-28. <http://dx.doi.org/10.7827>
- Bedford, C. L. (2011). *The role of learning agility in workplace performance and career advancement* [Doctoral dissertation]. University of Minnesota.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bavolar, J., & Orosová, O. G. (2015). Decision-making styles and their associations with decision-making competencies and mental health. *Judgment and Decision Making*, 10(1), 115-122. <https://doi.org/10.1017/S1930297500003223>
- Bruine de Bruin, W., Parker, A. M., & Fischhoff, B. (2020). Decision-making competence: More than intelligence?. *Current Directions in Psychological Science*, 29(2), 186-192.
- Brown, L. M., & Posner, B. Z. (2001). Exploring the relationship between learning and leadership. *Leadership & Organization Development Journal*, 22(6), 274-280. <https://doi.org/10.1108/01437730110403204>
- Bouland-van Dam, S. I., Oostrom, J. K., & Jansen, P. G. (2022). Development and validation of the leadership learning agility scale. *Frontiers in Psychology*, 13, 991299. <https://doi.org/10.3389/fpsyg.2022.991299>
- Buhi, E. R., Goodson, P., & Neilands, T. B. (2007). Structural equation modeling: a primer for health behavior researchers. *American Journal of Health Behavior*, 31(1), 74-85.
- Bywater, J., Hezlett, S., Lewis, J., & Smith, A. M. (2021). The importance of coaching and learning agility in a high change world. *Assessment & Development Matters*, 13(1), 18-26.
- Burke, W. W. (2018). *A Guide for learning about learning agility*. Technical report.
- Ceschi, A., Demerouti, E., Sartori, R., & Weller, J. (2017). Decision-making processes in the workplace: How exhaustion, lack of resources and job demands impair them and affect performance. *Frontiers in Psychology*, 8, 313. <https://doi.org/10.3389/fpsyg.2017.00313>
- Connolly, J. J. (2001). *Assessing the construct validity of a measure of learning agility* [Doctoral dissertation]. Florida International University.
- Curşeu, P. L., & Schruijer, S. G. (2012). Decision styles and rationality: An analysis of the predictive validity of the General Decision-Making Style Inventory. *Educational and Psychological Measurement*, 72(6), 1053-1062. <https://doi.org/10.1177/0013164412448066>

- Dai, G., De Meuse, K. P., & Tang, K. Y. (2013). The role of learning agility in executive career success: The results of two field studies. *Journal of managerial issues*, 25(2), 108-131.
- Delaney, R., Strough, J., Parker, A. M., & de Bruin, W. B. (2015). Variations in decision-making profiles by age and gender: A cluster-analytic approach. *Personality and Individual Differences*, 85, 19-24. <https://doi.org/10.1016/j.paid.2015.04.034>
- De Meuse, K. P. (2017). Learning agility: Its evolution as a psychological construct and its empirical relationship to leader success. *Consulting Psychology Journal: Practice and Research*, 69(4), 267–295. <https://doi.org/10.1037/cpb0000100>
- De Meuse, K. P. (2019). A meta-analysis of the relationship between learning agility and leader success. *Journal of Organizational Psychology*, 19(1), 25-34. <https://doi.org/10.33423/jop.v19i1.1088>
- De Meuse, K. P., Dai, G., Hallenbeck, G. S., & Tang, K. Y. (2008). Using learning agility to identify high potentials around the world. *Korn/Ferry Institute*, 1-22.
- De Meuse, K. P., Dai, G., Eichinger, R. W., Page, R. C., Clark, L. P., & Zewdie, S. (2011, January). The development and validation of a self assessment of learning agility. In *Society for Industrial and Organizational Psychology Conference, Chicago, Illinois*.
- De Meuse, K. P., Dai, G., Swisher, V. V., Eichinger, R. W., & Lombardo, M. M. (2012). Leadership development: Exploring, clarifying, and expanding our understanding of learning agility. *Industrial and Organizational Psychology*, 5(3), 280-286.
- DeRue, D. S., Ashford, S. J., & Myers, C. G. (2012). Learning agility: In search of conceptual clarity and theoretical grounding. *Industrial and Organizational Psychology*, 5(3), 258-279. <https://doi.org/10.1111/j.1754-9434.2012.01444.x>
- Dewberry, C., Juanchich, M., & Narendran, S. (2013). Decision-making competence in everyday life: The roles of general cognitive styles, decision-making styles and personality. *Personality and Individual Differences*, 55(7), 783-788.
- Di Fabio, A., & Kenny, M. E. (2012). The contribution of emotional intelligence to decisional styles among Italian high school students. *Journal of Career Assessment*, 20(4), 404-414. <https://doi.org/10.1177/1069072712448893>
- Dumitriu, C., Timofti, I. C., Nechita, E., & Dumitriu, G. (2014). The influence of the locus of control and decision-making capacity upon the leadership style. *Procedia-Social and Behavioral Sciences*, 141, 494-499. <https://doi.org/10.1016/j.sbspro.2014.05.086>
- Eberlin, R. J., & Tatum, B. C. (2008). Making just decisions: Organizational justice, decision making, and leadership. *Management Decision*, 46(2), 310-329. <https://doi.org/10.1108/00251740810854177>
- Eberlin, R., & Tatum, B. C. (2005). Organizational justice and decision making: When good intentions are not enough. *Management Decision*, 43(7/8), 1040-1048. <https://doi.org/10.1108/00251740510610035>
- El Othman, R., El Othman, R., Hallit, R., Obeid, S., & Hallit, S. (2020). Personality traits, emotional intelligence and decision-making styles in Lebanese universities medical students. *BMC psychology*, 8, 1-14. <https://doi.org/10.1186/s40359-020-00406-4>
- Ghaleno, F. R., Pourshafei, H., & Yunesi, M. R. A. (2015). Decision making styles of managers and its relation with their job performance in high schools of Birjand city. *Cumhuriyet Üniversitesi Fen Edebiyat Fakültesi Fen Bilimleri Dergisi*, 36(3), 471-481.
- Ghosh, S., & Muduli, A. (2021). Learning agility, culture and outcome: an empirical study. *International Journal of Indian Culture and Business Management*, 23(1), 95-110. <https://doi.org/10.1504/IJICBM.2021.115413>
- Gravett, L. S., & Caldwell, S. A. (2016). *What is learning agility?* (pp. 1-8). Palgrave Macmillan.
- Hallenbeck, G., & Santana, L. (2019). Great leaders are great learners: How to develop learning-agile high potentials?. White Paper. *Center for Creative Leadership*.

- Hallinger, P., & Heck, R. H. (2011). Conceptual and methodological issues in studying school leadership effects as a reciprocal process. *School Effectiveness and School Improvement*, 22(2), 149-173. <https://doi.org/10.1080/09243453.2011.565777>
- Hamilton, K., Shih, S. I., & Mohammed, S. (2016). The development and validation of the rational and intuitive decision styles scale. *Journal of Personality Assessment*, 98(5), 523-535. <https://doi.org/10.1080/00223891.2015.1132426>
- Handayani, D. A. P., & Ambara, D. P. (2021, December). Does learning agility depend on age and work experience? In *4th International Conference on Innovative Research Across Disciplines (ICIRAD 2021)* (pp. 321-326). Atlantis Press. [10.2991/assehr.k.211222.051](https://doi.org/10.2991/assehr.k.211222.051)
- Hansson, P., & Andersen, J. A. (2004). *The Swedish principal-leadership style, decision-making style and motivation profile*. In The Annual Meeting of ENIRDEM 2004 (European Network for Improving Research and Development in Educational Management) Helsinki, Finland, September 23-26, 2004.
- Haring, S., Shankar, J., & Hofkes, K. (2020). *The potential of learning agility*. HFMTalentindex.com. <https://www.hfmtalentindex.co.za/wp-content/uploads/2017/12/The-Potential-of-LearningAgility-Research-Paper.pdf>
- Hariri, H., Monypenny, R., & Prideaux, M. (2016). Teacher-perceived principal leadership styles, decision-making styles and job satisfaction: How congruent are data from Indonesia with the Anglophile and Western literature?. *School Leadership & Management*, 36(1), 41-62. <https://doi.org/10.1080/13632434.2016.1160210>
- Harrison, E. F. (1996). A process perspective on strategic decision making. *Management decision*, 34(1), 46-53. <https://doi.org/10.1108/00251749610106972>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Howard, D. (2017). *Learning agility in education: analysis of pre-service teacher's learning agility and teaching performance* [Doctoral dissertation]. Tarleton State University.
- Hunt, R. G., Krzystofiak, F. J., Meindl, J. R., & Yousry, A. M. (1989). Cognitive style and decision making. *Organizational Behavior and Human Decision Processes*, 44(3), 436-453. [https://doi.org/10.1016/0749-5978\(89\)90018-6](https://doi.org/10.1016/0749-5978(89)90018-6)
- Jo, Y., & Hong, A. J. (2022). Impact of agile learning on innovative behavior: A moderated mediation model of employee engagement and perceived organizational support. *Frontiers in Psychology*, 13, 900830. <https://doi.org/10.3389/fpsyg.2022.900830>
- Jonier, B. & Josephs, S. (2007). *Leadership agility*. Jossey- Bass
- Juanchich, M., Dewberry, C., Sirota, M., & Narendran, S. (2016). Cognitive reflection predicts real-life decision outcomes, but not over and above personality and decision-making styles. *Journal of Behavioral Decision Making*, 29(1), 52-59. <https://doi.org/10.1002/bdm.1875>
- Keller, J. W., & Yang, Y. E. (2008). Leadership style, decision context, and the poliheuristic theory of decision making: An experimental analysis. *Journal of Conflict Resolution*, 52(5), 687-712. <https://doi.org/10.1177/0022002708320889>
- Kline, R. B. (2016). *Principles and practice of structural equation modeling*. Guilford.
- Larson Jr, J. R., Foster-Fishman, P. G., & Franz, T. M. (1998). Leadership style and the discussion of shared and unshared information in decision-making groups. *Personality and Social Psychology Bulletin*, 24(5), 482-495. <https://doi.org/10.1177/0146167298245004>
- Laxson, E. N. (2018). *Within and between person effects of learning agility: A longitudinal examination of how learning agility impacts future career success* [Doctoral dissertation]. Colorado State University. <https://hdl.handle.net/10217/191318>

- Leykin, Y., & DeRubeis, R. J. (2010). Decision-making styles and depressive symptomatology: Development of the Decision Styles Questionnaire. *Judgment and Decision Making*, 5(7), 506 [.https://doi.org/10.1017/S1930297500001674](https://doi.org/10.1017/S1930297500001674)
- Lombardo, M. M., & Eichinger, R. W. (2000). High Potentials as High Learners. *Human Resource Management*, 39, 321-330. <https://doi.org/10.1002/1099-050X>
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7(1), 83. <https://doi.org/10.1177/1049731511414148>
- MacKinnon, D. P. (2011). Integrating mediators and moderators in research design. *Research on Social Work Practice*, 21(6), 675-681. <https://doi.org/10.1177/1049731511414148>
- Mau, W. C. (1995). Decision-making style as a predictor of career decision-making status and treatment gains. *Journal of Career Assessment*, 3(1), 89-99. <https://doi.org/10.1177/1069072795003001>
- McCall Jr, M. W. (2004). Leadership development through experience. *Academy of Management Perspectives*, 18(3), 127-130. <https://doi.org/10.5465/ame.2004.14776183>
- Miller, S. (2018). *Exploring the concept of learning agility* [Doctoral dissertation]. New Zealand. <http://hdl.handle.net/10179/15173>
- Nygren, T. E., & White, R. J. (2002, September). *Assessing individual differences in decision making styles: Analytical vs. intuitive*. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting (Vol. 46, No. 12, pp. 953-957). Sage. <https://doi.org/10.1177/15419312020460120>
- Olcum, D., & Titrek, O. (2015). The effect of school administrators' decision-making styles on teacher job satisfaction. *Procedia-Social and Behavioral Sciences*, 197, 1936-1946. <https://doi.org/10.1016/j.sbspro.2015.07.575>
- Ozgenel, M. (2018). Modeling the relationships between school administrators' creative and critical thinking dispositions with decision making styles and problem solving skills. *Educational Sciences: Theory & Practice*, 18(3). <https://doi.org/10.12738/estp.2018.3.0068>
- Palmiero, M., Nori, R., Piccardi, L., & D'Amico, S. (2020). Divergent thinking: The role of decision-making styles. *Creativity Research Journal*, 32(4), 323-332. <https://doi.org/10.1080/10400419.2020.1817700>
- Park, D. (1996). Gender role, decision style and leadership style. *Women in Management Review*, 11(8), 13-17. <https://doi.org/10.1108/09649429610148737>
- Phillips, S. D., Paziienza, N. J., & Ferrin, H. H. (1984). Decision-making styles and problem-solving appraisal. *Journal of Counseling Psychology*, 31(4), 497-502. <https://doi.org/10.1037/0022-0167.31.4.497>
- Phillips, W. J., Fletcher, J. M., Marks, A. D. G., & Hine, D. W. (2016). Thinking styles and decision making: A meta-analysis. *Psychological Bulletin*, 142(3), 260-290. <https://doi.org/10.1037/bul0000027>
- Salo, I., & Allwood, C. M. (2011). Decision-making styles, stress and gender among investigators. *Policing: An International Journal of Police Strategies & Management*, 34(1), 97-119. <https://doi.org/10.1108/13639511111106632>
- Saputra, N., Abdinagoro, S. B., & Kuncoro, E. A. (2018). The mediating role of learning agility on the relationship between work engagement and learning culture. *Pertanika Journal of Social Sciences and Humanities*, 26, 117-130.
- Savery, L. K., Soutar, G. N., & Dyson, J. D. (1992). Ideal decision-making styles indicated by deputy principals. *Journal of Educational Administration*, 30(2). <https://doi.org/10.1108/09578239210014441>
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research*, 8(2), 23-74.

- Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement*, 55(5), 818-831.
- Smith, B. C. (2015). *How does learning agile business leadership differ? Exploring a revised model of the construct of learning agility in relation to executive performance* [Doctoral dissertation]. Columbia University.
- Sproles, E. K., & Sproles, G. B. (1990). Consumer decision-making styles as a function of individual learning styles. *Journal of Consumer Affairs*, 24(1), 134-147. <https://doi.org/10.1111/j.1745-6606.1990.tb00262.x>
- Stanton, M. C. B., & Roelich, K. (2021). Decision making under deep uncertainties: A review of the applicability of methods in practice. *Technological Forecasting and Social Change*, 171, 120939. <https://doi.org/10.1016/j.techfore.2021.120939>
- Sung, E. (2021). Seven facets of learning agility in higher education for future society. *Educational Technology International*, 22(2), 169-197. <https://doi.org/10.23095/ETI.2021.22.2.169>
- Tabachnick, B. G., & Fidell, L. S. (2015). *Using multivariate statistics*. Allyn and Bacon.
- Tasdelen, A. (2002). *Decision-making styles of teacher candidates according to different psychosocial variables* [Doctoral dissertation]. Dokuz Eylül University, İzmir.
- Terrell, R. S., & Rosenbusch, K. (2013). How global leaders develop. *Journal of Management Development*, 32(10), 1056-1079. <https://doi.org/10.1108/JMD-01-2012-0008>
- Thunholm, P. (2004). Decision-making style: habit, style or both?. *Personality and Individual Differences*, 36(4), 931-944. [https://doi.org/10.1016/S0191-8869\(03\)00162-4](https://doi.org/10.1016/S0191-8869(03)00162-4)
- Thunholm, P. (2008). Decision-making styles and physiological correlates of negative stress: Is there a relation?. *Scandinavian Journal of Psychology*, 49(3), 213-219.
- Timperley, H. (2011). Knowledge and the leadership of learning. *Leadership and Policy in Schools*, 10(2), 145-170. <https://doi.org/10.1080/15700763.2011.557519>
- Tripathi, A., & Dhir, S. (2022). HRD interventions, learning agility and organizational innovation: A PLS-SEM modelling approach. *International Journal of Organizational Analysis*, 31(6), 2322-2336. <https://doi.org/10.1108/IJOA-12-2021-3064>
- Vanlommel, K., Vanhoof, J., & Van Petegem, P. (2016). Data use by teachers: The impact of motivation, decision-making style, supportive relationships and reflective capacity. *Educational Studies*, 42(1), 36-53. <https://doi.org/10.1080/03055698.2016.1148582>
- Yazıcı, Ş. (2020). *Öğretmenlerin öğrenme çevikliği, değişime hazır olma durumları ve performansları arasındaki ilişkiler örüntüsü* (The pattern of relationship between teachers' learning agility, readiness for change and teacher performance) [Doctoral dissertation]. İstanbul Sabahattin Zaim University.
- Yazıcı, Ş. & Özgenel, M. (2020). Marmara öğrenme çevikliği ölçeğinin geliştirilmesi, geçerlik ve güvenirlik çalışması. *Journal of History School*, 44,365-393.
- Yazıcı, Ş., Özgenel, M., Koç, M. H., & Baydar, F. (2022). The mediator role of employee voice in the effect of agile leadership on teachers' affective occupational commitment. *SAGE Open*, 12(3), 21582440221119480.
- Zhang, W., & Brundrett, M. (2010). School leaders' perspectives on leadership learning: The case for informal and experiential learning. *Management in Education*, 24(4), 154-158.
- Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206. <https://doi.org/10.1086/651257>
- Wang, Y., Highhouse, S., Lake, C. J., Petersen, N. L., & Rada, T. B. (2017). Meta-analytic investigations of the relation between intuition and analysis. *Journal of Behavioral Decision Making*, 30(1), 15-25.
- Wilson, D. T. (1971). Industrial buyers' decision-making styles. *Journal of Marketing Research*, 8(4), 433-436.
- Wood, N. L., & Highhouse, S. (2014). Do self-reported decision styles relate with others' impressions of decision quality?. *Personality and Individual Differences*, 70, 224-228.