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The Effect of Agile Leadership on Teachers' Professional Development and Performance

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Abstract

The aim of the study is to determine the effect of the agile leadership characteristics of school principals on the professional development and performance of teachers. The relational survey model was used in the study and data were collected from 575 teachers. Data were collected through the Marmara Agile Leadership Scale, the Attitude Scale towards Professional Development and the Performance Scale. The data were analyzed by t-test, ANOVA, correlation, and regression tests. It was determined that the agile leadership characteristics of school principals perceived by teachers significantly predicted and positively affected teachers' attitudes towards professional development and their performances. In addition, it was revealed that teachers' attitudes towards professional development significantly predicted and positively affected their performance.

Keywords: Leadership, Agile Leadership, Professional Development, Teacher Performance

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Introduction

As a result of rapid developments and changes in the field of science and technology, uncertainty, competition and chaotic situations have emerged. This situations have become important problems of organizational life (Boyer & Robert, 2006). This chaotic and complex situation of the world is named with the acronym “VUCA”, which is formed by using the English initials of the expressions "votality", "uncertainty", "complexity" and "ambiguity" in western literature (Bennett & Lemoine, 2014). It is important as a solution option for the "VUCA" world to support the change in the organizational platform, to create more agile and flexible organizational structures to increase productivity (Graetz, 2010). To create these structures in question, leadership characteristics that are both new and effective are needed. Looking at the leaders who managed to break traditional patterns, it is seen that they are aware of the need for constant change in processes, technologies, and structures and they act flexible and agile in the decision-making process. At this point, the concept of agile leadership emerged (Bennett & Lemoine, 2014).

Agile leadership is accepted as one of the contemporary leadership approaches and does not correspond to a single meaning in the literature. Agile leader can be defined as a leader who anticipates the internal and external needs of the organization and helps the organization adapt to the changing environment and technology in line with the needs of the organization (Kouzes & Posner, 1999). In addition, agile leaders should be people who can cooperate in development teams, create synergy with the ability to provide harmony and order, be emotionally flexible, act as a catalyst between internal and external stakeholders, question the status quo, and provide an empathetic work environment based on mutual communication (Collins, 2018).

When the field literature is reviewed, it is seen that there are certain dimensions of agile leadership such as "digital literacy-technology agility", "synergy agility", "shared responsibility-proactivity agility", "openness to innovations-adaptation agility" and "emotional agility" (Özdemir, 2020). Digital literacy-technology agility can be defined as the ability of the organization to react to rapidly changing technological developments at the same speed. Agile leader firstly affects the existing organizational culture, then the business processes and finally the corporate performance (Hinkler et al., 2011). In the synergy agility role of leaders, the ability to influence individuals working through empathy in the light of a holistic orientation is underlined. Synergy agility is an intuitive ability that establishes an intense empathy relationship and resolves conflicts that are deemed harmful to be beneficial for all individuals (Joiner & Josephs, 2007). In the role of shared responsibility and proactivity agility, leaders are expected to question the existing order and draw a roadmap with foresight in order to ensure efficiency. Proactive leaders are leaders who examine the status quo, try to improve the existing conditions or take priority in order to create a new environment (Brockbank, 1999). Some studies show teachers' productivity, motivation and performance increase in organizations where decision-making processes are used and suitable

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for teamwork and this makes it easier to reach organizational goals (Lunenburg & Ornstein, 2013). The concept of "emotional agility", which is considered important for business success, is the ability of an individual to manage his thoughts and emotions in a complex and rapidly changing knowledge economy. It is emphasized that individuals with emotional agility can help reduce mistakes, cope with stress, increase the workforce and adopt a more innovative perspective (Goleman et al., 2017). Leaders need to be initiators of organizational renewal with their adaptability skills. Leaders undertake this task with the role of openness to innovations and agility to adapt (Almahamid et al., 2010). In the context of school, the leadership approaches of school principals have an important place in solving conflicts and uncertain situations (Doeze Jager-van Vliet, 2017). School principals who adopt the agile leadership approach, see the problems in school as an element that will provide change and development, and focus on the strengths of the employees of the organization, which can contribute positively to the development of the stakeholders and therefore the school. In this sense, it can be said that agile leaders constantly support their followers in terms of professional development and offer opportunities.

As pedagogical reforms taking place around the world creates new roles for teachers and causes significant and continuous changes in teaching practices, it has been underlined that teachers should be in a continuous professional development process (Guskey, 2000; Posnanski, 2002). To increase the positive impact of teachers on students' learning, it is necessary to improve the teaching capacity of teachers. In addition, teachers' expertise and teaching skills directly affect what students learn (Feiman-Nemser, 2001; Hanushek, 2011). For this reason, the professional development of teachers is considered as an important mechanism on student outcomes and this mechanism is needed to improve the quality of teaching and students' learning (Cochran-Smith et al., 2020; Guskey & Yoon, 2009).

Professional development of teachers can be defined as programs and activities that they experience individually or collectively, designed to improve their existing knowledge and practices about teaching (Beauchamp et al., 2014). Thanks to research and activities that support professional development, teachers' pedagogical skills improve (Hill, 2011) and classroom practices change (Kennedy, 2016). In general, it is seen that highly effective professional development activities include activities that adopt a collaborative approach (Rhodes & Beneicke, 2002) and focus on thinking through inquiry (Hardy, 2008). Nabhani et al. (2014) state that professional development activities that improve teachers' teaching and practice are networking, self-reflection, coaching and action research. The main purpose of such professional development activities is to improve teachers' knowledge, skills and competencies, to increase their performance and ultimately to contribute to the quality of education (Van den Berg, 2002).

Schools and organizations have certain goals that they try to achieve. To achieve these determined goals, teachers must perform at a certain level. Performance is the verbal or numerical expression of what has been achieved within the specified time, under the guidance

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of the determined targets (Akal, 2000). In other words, performance is the realization of the task and the goods, services or ideas put forward within the framework of this purpose in a way that meets the criteria previously determined within the scope of the given task (Pugh, 1991). The factors that determine the performance of the teacher are motivation, competence and work environment. By keeping these three elements at a high level, the targeted high-performance level can be achieved. As a school administrator, the agile leader increases the efficiency, motivation and performance of teachers by supporting teamwork and using decision-making processes (Lunenburg & Ornstein, 2013). The agile leader primarily affects the organizational culture, then the business processes and finally the performance of the teacher and the institution (Hinkler et al., 2011).

Looking at the literature, many studies deal with the relationship between different leadership styles of school administrators and teacher performance (Adeyemi, 2010; Akçekoca & Bilgin, 2016; Aunga & Masare, 2017; Bilgin Yurdaöz, 2018; Korkmaz, 2005; Özgenel & Aktaş, 2020). Studies on the concept of agile leadership are mostly concentrated in the field of business and around the concept of organizational agility (Akkaya et al., 2020; Akkaya & Tabak, 2020; Fielitz & Hug, 2019; Koçyiğit & Akkaya, 2020; Özdemir & Çetin, 2019; Özdemir, 2020). In addition, the studies on the subject mostly focuse on synergy, proactivity, etc., which are the sub-dimensions of agile leadership (Hulpia et al. 2009; Moore, 2009; Strauss et al., 2009; Töremen, 2001), information technologies (Cegarra-Navarro et al., 2016; Lu & Ramamurthy, 2011; Zain et al., 2005) and the relationship between learning agility and performance (Yazıcı, 2020). However, no study has been found that deals with "the effect of school principals' agile leadership characteristics on teachers' professional development and performance," which is the subject of this research. In this context, our research aims to determine the effect of school principals' agile leadership characteristics on teachers' professional development and performance. It is important to investigate whether the agile leadership characteristics of their principals have an impact on the professional development and performance of teachers. In addition, it is important for school principals who exhibit agile leadership characteristics to be aware of whether they have an impact on the professional development and performance of teachers and to reconsider their chosen leadership approach. It is considered that this research will help teachers realize how the leadership approach adopted by the school principal affects their professional development and performance. In the light of this aim, the following questions were tried to be answered:

- What is the level of school principals' agile leadership characteristics perceived by teachers and teachers' attitudes towards professional development and performances?
- Do agile leadership characteristics of school principals perceived by teachers, teachers' attitudes towards professional development and performances show a significant difference according to teachers' gender, graduation level, school level, age and professional seniority?

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- Is there a significant relationship between the agile leadership characteristics of school principals perceived by teachers and teachers' attitudes towards professional development and performances?
- Do school principals' agile leadership characteristics, perceived by teachers, predict teachers' attitudes towards professional development and performances?
- Does the professional development of teachers significantly predict their performance?

Method

Research Model

The research aims to determine the effect of the agile leadership characteristics of school principals on the professional development and performance of teachers. For this reason, the relational survey model, one of the quantitative research methods, was used as the research model. The relational model is a research model that mostly examines relationships and connections (Büyüköztürk et al., 2017).

Population and Sample

The study population of the research consists of 198.165 teachers working in the province of Istanbul in the 2020-2021 academic year. The teachers whose opinions will be sought from the universe were determined by using the simple random sampling method. Since each unit is determined randomly in the simple random method, each unit in the universe has the opportunity to be selected equally and independently from the sample and it is highly likely to represent the universe (Büyüköztürk et al., 2017). While calculating the sample size from the population, 95% confidence interval and 5% margin of error criteria were taken into account. According to this criterion, it was calculated that the sample size should be at least 383.575 teachers voluntarily participated in this research. For this reason, it can be said that the sample size represents the population. 80.2% of the 575 teachers participating in the research are female and 19.8% are male teachers. 81% of the teachers have undergraduate degrees and 19% have graduate degrees. 41.6% of the teachers participating in the research work at primary school, 37.9% at secondary school and 20.5% at high school. 10.4% of the teachers are 30 years old and under, 41.9% are 31-40 years old, 34.4% are 41-50 years old, 13.2% are 51 years old and over. 8.7% of the teachers have seniority of 0-5 years, 17.4% of them have 6-10 years. 23% of them have 11-15 years, 21.2% of them have 16-20 years, 29.7% of them have seniority of 21 years or more.

Data Collection Tool

In the study, the data were collected from the teachers working in the schools by means of a scale. In addition, a personal information form was used to determine the demographic characteristics of the teachers participating in the study. While determining the measurement tools, the related literature was scanned and the previous leadership studies, measurement tools related to professional development and performance were examined.

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The data collection tool of the research consists of four parts. The first section is the Demographic Information section. In the second part, there is *the Marmara Agile Leadership Scale.* The scale, which consists of 34 items and 3 sub-dimensions, was developed by Özgenel and Yazıcı (2020). The sub-dimensions of the scale were determined as situational awareness, human relations, and self-awareness. The 5-point Likert-type scale was rated as "Never-0, Rarely-1, Sometimes-2, Often-3, Always-4". Sub-dimension items of the scale can be added as well as a total score. There is no reversed scored item and the score that can be obtained from the scale is between 0-136. In addition, arithmetic mean can also be taken. While a high score indicates high agile leadership characteristics, a low score indicates the opposite. After EFA and CFA, the reliability coefficients were calculated as .973 and .959, respectively.

In the third part, there is *the Attitude Scale towards Professional Development*. The scale, which consists of a total of 6 items and one dimension, was adapted into Turkish by Özer and Beycioğlu (2010). The original scale was developed by Torff et al. (2005). Sessions and Byrnes (2005). The 5-point Likert-type scale was rated as "Disagree-1, Partially Agree-2, Moderately Agree-3, Mostly Agree-4, Totally Agree-5". The second item in the scale is coded in reverse and and the score that can be obtained from the scale is between 6-30. The Cronbach alpha reliability coefficient of the scale was calculated as .784.

In the fourth section, there is *the Performance Scale* developed by Rahman and Bullock (2004) and adapted into Turkish by Erdoğan (2011). The scale consists of a total of 7 items and a single dimension. The scale, which is a 5-point Likert type, was rated as "I Strongly Disagree-1, Disagree-2, Undecided-3, Agree-4, Totally Agree-5". There is no reversed scored item and the total score that can be obtained from the scale is in the range of 7-35. The Cronbach Alpha value was calculated as .830.

Analysis of Data

The data obtained in the research were analyzed with the SPSS 25 package program. Firstly, the normality distribution of the data and then the Skewness and Kurtosis values were checked. The obtained Kurtosis and Skewness values are given in Table 1.

Table 1. *Agile leadership, attitude towards professional development and performance scales' mean, standard deviation, skewness, kurtosis and reliability coefficients*

	N	M	Sd	Skewness	Kurtosis	Cronbach Alpha
Agile Leadership	575	2.82	.89	-.958	.653	.989
Professional Development	575	4.24	.62	-.835	.165	.776
Performance	575	4.20	.45	-.321	.128	.678

In Table 1, it is seen that the Skewness and Kurtosis values of Agile Leadership, Attitude towards Professional Development and Performance Scales are between -1. +1 values. Accordingly, it is seen that the scores of the scales show a normal distribution and the scales are reliable.

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Findings

The mean and standard deviation values of the scores obtained from the Agile Leadership, Attitude towards Professional Development and Performance Scale of the research group are given in Table 2.

Table 2. *Arithmetic mean and standard deviation values of the scales*

	N	M	sd	Evaluation
Agile Leadership	575	2.82	.89	Medium
Professional Development	575	4.24	.62	Very high
Performance	575	4.20	.45	High

As seen in Table 2, agile leadership was calculated as “medium” (M=2.82; sd=.89), professional development “very high” (M=4.24; sd=.62) and performance “high” (M=4.20; sd=.45).

Table 3 shows the results of the independent groups t-test, which was conducted to determine whether the teachers' agile leadership perceptions, attitudes towards professional development, and performances show a significant difference according to their gender.

Table 3. *Comparison of teachers' agile leadership perceptions, attitudes towards professional development and performance according to their gender*

	Groups	N	M	SD	t	df	p
Agile Leadership	Female	461	2.77	.93	-3.03	225	**.003**
	Male	114	3.01	.69			
Professional Development	Female	461	4.26	.60	1.62	157	.106
	Male	114	4.15	.69			
Performance	Female	461	4.18	.44	-1.90	573	.058
	Male	114	4.27	.48			

When Table 3 is examined, it is seen that while teachers' agile leadership perceptions are significantly different according to their genders ($t_{[575]}$=-3.03; p<.05), teachers' attitudes towards professional development ($t_{[575]}$=1.62; p>.05) and performances ($t_{[575]}$=-1.190; p>.05) do not differ significantly according to their genders. Agile leadership perceptions of male teachers (M=3.01; SD=.69) are higher than female teachers' perceptions of agile leadership (M=2.77; SD=.93).

Table 4 shows the results of the independent groups t-test, which was conducted to determine whether the teachers' agile leadership perceptions, attitudes towards professional development, and performances show a significant difference according to their education level.

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Table 4. *Comparison of teachers' agile leadership perceptions, attitudes towards professional development and performance according to their graduation levels*

	Groups	N	M	SD	t	df	p
Agile Leadership	Bachelor's degree	466	2.87	.86	3.03	573	**.003**
	Postgraduate	109	2.58	.97			
Professional Development	Bachelor's degree	466	4.23	.63	-.710	573	.077
	Postgraduate	109	4.28	.56			
Performance	Bachelor's degree	466	4.20	.46	.295	573	.058
	Postgraduate	109	4.19	.43			

As seen in Table 4, while teachers' attitudes towards professional development ($t_{[575]}$=-710; p>.05) and performances ($t_{[575]}$=.295; p>.01) do not differ significantly by education level, agile leadership perceptions of teachers differ significantly according to their education levels ($t_{[575]}$=-3.03; p<.01). The agile leadership perceptions of the teachers with a bachelor's degree (M=2.87; SD=.86) are higher than the agile leadership perceptions of the teachers with a postgraduate degree (M=2.58; SD=.97).

Table 5 shows the results of one-way analysis of variance (ANOVA), which was conducted to determine whether the teachers' perceptions of agile leadership, their attitudes towards professional development and their performance differ according to their school levels.

Table 5. *Comparison of teachers' agile leadership perceptions, attitudes towards professional development and performance according to school level*

	School Level	N	M	SD	df	F	p	Difference
Agile Leadership	A- Primary	239	2.99	.80	2	8.179	**.000**	**A>B; A>C**
	B- Secondary	218	2.68	.91	572			
	C- High School	118	2.71	.96	574			
	Total	575	2.82	.89				
Professional Development	A- Primary	239	4.27	.58	2	.476	.621	--
	B- Secondary	218	4.23	.62	572			
	C- High School	118	4.21	.69	574			
	Total	575	4.24	.62				
Performance	A- Primary	239	4.26	.43	2	4.465	**.012**	**A>B; A>C**
	B- Secondary	218	4.16	.45	572			
	C- High School	118	4.14	.49	574			
	Total	575	4.20	.45				

When Table 5 is examined, teachers' attitudes towards professional development do not differ significantly according to the school level they work (F=.476; p<.05). However, teachers' agile leadership perceptions (F=8.179; p<.05) and performances (F=4.465; p<.05)

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differ significantly according to their school levels. Teachers working in primary schools perceive the agility characteristics of school principals (M=2.99; SD=.80) more positively than teachers working in secondary schools (M=2.68; SD=.91) and high schools (M=2.71; SD=96). In addition, the performance of teachers working in primary school (M=4.26; SD=.43) is higher than that of teachers working in secondary schools (M=4.16; SD=.45) and high schools (M=4.14; SD=.49).

Table 6 shows the results of one-way analysis of variance (ANOVA), which was conducted to determine whether the teachers' perceptions of agile leadership, their attitudes towards professional development and their performance differ according to their age.

Table 6. *Comparison of teachers' agile leadership perceptions, attitudes towards professional development and performance according to their age*

	Age	N	M	SD	df	F	p	Difference
Agile Leadership	A-30 and under	60	2.90	.96	3	1.065	.363	--
	B-31-40	241	2.74	.974	571			
	C-41-50	198	2.88	.803	574			
	D-51+	76	2.82	.800				
	Total	575	2.82	.895				
Professional Development	A-30 and under	60	4.36	.66	3	2.316	.075	--
	B-31-40	241	4.25	.62	571			
	C-41-50	198	4.16	.62	574			
	D-51+	76	4.33	.57				
	Total	575	4.24	.62				
Performance	A-30 and under	60	4.31	.38	3	1.976	.116	--
	B-31-40	241	4.16	.49	571			
	C-41-50	198	4.19	.44	574			
	D-51+	76	4.24	.40				
	Total	575	4.20	.45				

As seen in Table 6, teachers' agile leadership perceptions (F=1.065; p>05), attitudes towards professional development (F=2.316; p>05) and performance (F=1.976; p>05) do not differ significantly according to their age. In other words, the ages of the teachers do not make a significant difference in their perceptions of agile leadership, their attitudes towards professional development and their performance.

Table 7 shows the results of one-way analysis of variance (ANOVA), which was conducted to determine whether the teachers' perceptions of agile leadership, their attitudes towards professional development and their performance differ according to their seniority.

When Table 7 is examined, teachers' agile leadership perceptions (F=.893; p>.05) and performances (F1.197=; p>.05) do not differ significantly according to their years of seniority. However, teachers' attitudes towards professional development differ significantly according to their seniority (F=3.646; p<.05). Attitudes towards professional development of teachers with a seniority of 5 and below (M=4.44; SD=.60) are more positive than teachers

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with a seniority of 6-10 years (M=4.07; SD=.70).

Table 7. *Comparison of teachers' agile leadership perceptions, attitudes towards professional development and performance according to their seniority*

	Seniority	N	M	sd	df	F	p	Difference
Agile Leadership	A-5 and under	50	2.95	.90	4	.893	.468	--
	B-6-10	100	2.71	1.04	570			
	C-11-15	132	2.77	.94	574			
	D-16-20	122	2.87	.81				
	E-21+	171	2.85	.80				
	Total	575	2.82	.89				
Professional Development	A-5 and under	50	4.44	.60	4	3.646	**.006**	**A>B**
	B-6-10	100	4.07	.70	570			
	C-11-15	132	4.28	.60	574			
	D-16-20	122	4.19	.62				
	E-21+	171	4.28	.57				
	Total	575	4.24	.62				
Performance	A-5 and under	50	4.22	.47	4	1.197	.311	--
	B-6-10	100	4.14	.52	570			
	C-11-15	132	4.23	.43	574			
	D-16-20	122	4.15	.47				
	E-21+	171	4.24	.40				
	Total	575	4.20	.45				

The results of the Pearson Correlation analysis conducted to determine the level of relationship between teachers' agile leadership perceptions and their attitudes and performances towards professional development are presented in Table 8.

Table 8. *The results of correlation analysis between teachers' perceptions of agile leadership attitudes towards professional development and performances*

		1	2	3
1-Agile Leadership	r	--		
	n	575		
2-Professional Developmet	r	.162**	--	
	n	575	575	
3-Performance	r	.373**	.318**	--
	n	575	575	575

**p<.01.

When Table 8 is examined, it is seen that there is a positive and low level (r=-.162; p<.01) relationship between school principals' agile leadership characteristics perceived by teachers and teachers' attitudes towards professional development. The agile leadership characteristics of the school principals perceived by the teachers and the performance of the teachers are positive and moderate (r=.373; p<.01). It is also seen that there is a positive and significantly moderate (r=.318; p<.01) relationship between teachers' attitudes towards professional development and their performance.

A simple regression analysis was conducted to examine whether school principals'

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agile leadership characteristics perceived by teachers predict teachers' attitudes towards professional development and the results are given in Table 9.

Table 9. *Regression analysis of school principles' agile leadership qualities predicting teachers' attitude towards professional development*

Independent Variables	Dependent Variable	B	Std. Error	(β)	t	p	R	R²	F	*p*
Constant		3,926	.085		46.167	.000	.162	.026	15.487	.000
Agile Leadership	Professional Development	.113	.029	.162	3,935	.000				

As seen in Table 9, it is striking that the agile leadership characteristics of school principals perceived by teachers significantly predict teachers' attitudes towards professional development ($p<.05$), affect them positively and explain approximately 3% of the total variance in teachers' attitudes towards professional development ($R=.162$; $R^2=.026$).

A simple regression analysis was conducted to examine whether school principals' agile leadership characteristics perceived by teachers predict teachers' performance and the results are given in Table 10.

Table 10. *Regression analysis of school principles' agile leadership qualities predicting teachers' attitude towards professional development*

Independent Variable	Dependent Variable	B	Std. Error	(β)	t	p	R	R²	F	*p*
Constant		3.665	.059		62.615	.000	.373	.139	92.888	.000
Agile Leadership	Performance	.191	.020	.373	9.638	.000				

When Table 10 is examined, it is determined that the agile leadership characteristics of school principals perceived by teachers significantly predict teachers' performance ($p<.05$), positively affect them and explain approximately 14% of the total variance in teachers' performance ($R=.373$; $R^2=.139$).

A simple regression analysis was conducted to examine whether teachers' attitudes towards professional development predict their performance and the results are given in Table 11.

Table 11. *Regression analysis of school principles' agile leadership qualities predicting teachers' attitude towards professional development*

Independent Variable	Dependent Variable	B	Std. Error	(β)	t	P	R	R²	F	*p*
Constant		3.214	.124		25.833	.000	.318	.101	64.497	.000
Professional Development	Performance	.233	.029	.318	8.031	.000				

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As seen in Table 11, it is revealed that teachers' attitudes towards professional development significantly predict teachers' performance ($p<.05$), positively affect them and explain 10% of the total variance in teachers' performance ($R=.318$; $R^2=.101$).

Discussion, Conclusion and Suggestions

Each school principal has more than one unique leadership style and the school principal manages the school based on this style. For example, school principals' autocratic, democratic, collaborative and liberating leadership styles affect teachers' performances positively or negatively (Özgenel & Aktaş, 2020). Agile leadership, which is accepted as one of the contemporary leadership approaches, is thought to be a solution to the complex organizational structure that exists today (Özdemir, 2020). From this point of view, it was aimed to determine the effect of school principals' agile leadership characteristics on teachers' professional development and performance.

According to teachers' perceptions, it was determined that school principals' agile leadership characteristics were at a "moderate" level. This finding was found to be inconsistent with other findings in the literature. In the study conducted by Çalışkan Yılmaz (2021), it was determined that school principals' agile leadership characteristics were at a "low" level in terms of teacher perceptions, and in the study conducted by Özdemir (2020), school principals' agile leadership characteristics were at a "high" level both in Turkey and England. It was observed that there was a significant difference in favor of men in teachers' agile leadership perceptions. In the study conducted by Çalışkan Yılmaz (2021), it was concluded that school principals' agile leadership characteristics did not show a significant difference in terms of gender. In addition, Özdemir's (2020) study reported that the agile leadership characteristics of school principals are similar according to the gender of teachers both in Turkey and England. From this point of view, it can be said that research findings on the agile leadership behaviors of school principals on the gender of teachers differ.

When the graduation status variable was examined, it was determined that the agile leadership perceptions of the graduate teachers made a significant difference. Özdemir (2020) found that while the agile leadership perceptions of the graduate teachers made a significant difference in Turkey, there wasn't any significant difference in terms of graduation status in England. However, as reported by Çalışkan Yılmaz (2021), teachers' agile leadership perceptions do not differ significantly in terms of their education level. When these results are evaluated, it can be said that as the education level of teachers increases, their awareness and knowledge of school principals' agile leadership behaviors increase, they look at school principals more critically and therefore teachers with postgraduate education think that school principals' agile leadership characteristics are lower. According to teachers' perceptions, a significant difference was found between school levels in terms of agile leadership. Primary school teachers think that school principals have higher agile leadership characteristics when compared to secondary and high school teachers. Çalışkan Yılmaz (2021) reported that teachers working in primary and secondary schools think that school principals have higher

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agile leadership levels than teachers working in high schools. While Özdemir (2020) determined that teachers working in kindergarten and primary school in Turkey perceive school administrators' agile leadership behaviors at a higher level than teachers working at other, there wasn't any significant difference in England. From this point of view, it can be said that teachers working at lower levels have to exhibit more active, agile, synergetic and proactive behaviors due to the nature of their students, school principals working at these levels adapt to the conditions of the school they work in and therefore exhibit higher level of agile leadership behaviors. Agile leadership perceptions of teachers do not make a significant difference according to their age. Çalışkan Yılmaz (2021) revealed in her study that there is no significant difference in teachers' perceptions of agile leadership in terms of their age. Agile leadership perceptions of teachers do not make a significant difference according to their seniority. In the study conducted by Çalışkan Yılmaz (2021), it was determined that teachers' agile leadership perceptions did not make a significant difference in terms of their seniority. Özdemir (2020) reported that while there was no significant difference in terms of seniority in Turkey, teachers' perceptions of agile leadership with a seniority of 1-10 years and 11-20 years were higher when compared to teachers with a seniority of 20 years in England. In accordance with the findings obtained from the age and seniority variables, it is commonly thought that agile leaders act independently of the age and seniority of their subordinates while managing the school.

It was determined that the attitude towards professional development is at a "very high" level according to teachers' perceptions. When the literature is examined, studies that do not overlap with this finding have been encountered. Eroğlu et al. (2018) and Karacabey (2021) revealed that teachers' attitudes towards professional development are moderate. Akçay-Kızılkaya (2012), on the other hand, determined that teachers' attitudes towards professional development are at a high level. It was concluded that the gender variable did not create a significant difference in teachers' attitudes towards professional development. There are studies in the literature that contradict this finding. In the study conducted by Karacabey (2021) a significant difference was found in favor of men in terms of professional development. In the study of Akçay-Kızılkaya and Özdemir (2012), it was observed that there was a significant difference in favor of women in terms of attitudes towards professional development. From this point of view, it can be said that teachers' attitudes towards professional development differ in terms of their gender. It was concluded that the variable of graduation status did not make a significant difference in teachers' attitudes towards professional development. This finding is also supported by the research conducted by Karacabey (2021). According to teachers' perceptions, there was no significant difference between school types in terms of attitudes towards professional development. When the current literature was examined, no study was found on the relationship between teachers' attitudes towards professional development and the types of schools they work in. However, in the study conducted by Karacabey (2021), it was determined that school principals working in high schools supported the professional development of teachers more than school

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principals working in primary and secondary schools. Teachers' attitudes towards professional development do not make a significant difference according to their age. When the literature review was conducted, no study was found on the relationship between teachers' attitudes towards professional development and their ages. Based on these findings, it can be said that teachers have an attitude towards professional development regardless of their graduation status, school types and age. It was determined that there is a significant difference between teachers' attitudes towards professional development and their seniority. The attitudes of teachers with a seniority of 0-5 years towards professional development are higher when compared to teachers with a seniority of 6-10 years. However, in the study conducted by Akçay-Kızılkaya and Özdemir (2012) no significant difference was found between teachers' attitudes towards professional development in terms of their seniority. When the research findings are evaluated, it can be said that teachers who are new to the profession tend to develop themselves more professionally than teachers with more seniority and their attitudes towards professional development decrease with the increase in their personal life burdens as seniority progresses.

It was determined that the performance is at a “high” level according to teachers’ perceptions. It was observed that there are studies in the literature that support the present finding. Mert and Özgenel (2020) found that teacher performance was perceived at a high level, while Özgenel and Aktaş (2020), Özgenel and Mert (2019) and Yazıcı (2020) found that teacher performance was at a very high level. It was concluded that the gender variable did not create a significant difference in the performance of teachers. Likewise, Tosuntaş (2017) and Özgenel and Aktaş (2020) concluded in their study that there is no differentiation in teacher performance by gender. Based on this finding, it can be said that teachers perform regardless of their gender. Despite the extra burdens of female teachers in their private lives, it is thought to be noteworthy that they have a similar level of performance with male teachers. It was concluded that the variable of graduation status did not make a significant difference in the performance of teachers. In the study conducted by Özgenel (2019) and Blegen et al. (1992), it was concluded that there was no significant difference in teacher/employee performance in terms of graduation status. While it was expected that teachers with master's or doctorate degrees would have higher attitudes towards professional development as a result of the education they received, the result was not like this. It is thought that why the attitudes of teachers with postgraduate education towards professional development are similar to teachers with graduate degrees should be investigated in depth. According to teacher perceptions, a significant difference was found between school types in terms of performance. It is striking that the performance of teachers working at the primary school level is higher than the performance of secondary and high school teachers. In the study conducted by Özgenel (2019), it was determined that the performance of teachers working at the primary school level is higher than the performance of secondary and high school teachers. Based on this finding, it was determined that the teachers working at the primary school level performed more in line with the students' development levels and expectations. However, it

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can be said that as the age of the students increases, various discipline and adolescence problems also increase and therefore, the teachers cannot show the desired performance. Teachers' performances do not make a significant difference according to their age. In the study conducted by Özgenel (2019), no significant difference was found between the performances and ages of teachers. However, there are also studies in the literature emphasizing a significant relationship between the age and performance of employees (Blegen et al., 1992; Koslowsky, 1987; Sturman, 2003). Teachers' performances do not make a significant difference in terms of their seniority. The study by Özgenel and Mert (2019) and Dilbaz Sayın and Arslan (2017) also support the present finding. Based on these findings, it can be said that as the age and seniority of the teachers increase, their performance does not decrease contrary to the general belief.

It is seen that there is a positive and low-level relationship between the agile leadership characteristics of school principals perceived by teachers and teachers' attitudes towards professional development. There is a positive and moderate relationship between the agile leadership characteristics of the school principals perceived by the teachers and the performance of the teachers. There is also a positive and moderately significant relationship between teachers' attitudes towards professional development and their performance. When the literature is examined, many studies on the effects of different leadership styles on teachers' performance have been encountered (Akçekoce & Bilgin, 2016; İnandı et al., 2016; Korkmaz, 2005; Özgenel & Aktaş, 2020). However, no study has been found on the relationship between school principals' agile leadership characteristics perceived by teachers and teachers' attitudes and performances towards professional development. Nevertheless, in the role of shared responsibility and proactivity agility, which are sub-dimensions of agile leadership, it is emphasized that leaders are people who question the existing order in order to ensure efficiency, and who can take priority in order to create a new environment by trying to make the existing conditions better (Brockbank, 1999). In the study of Hinkler et al. (2011) it is emphasized that the agile leader affects the existing organizational culture first, then the business processes and finally the performance of the institution. Findings from the present study support the literature.

One of the important findings of the research is that the agile leadership characteristics of school principals positively affect teachers' attitudes towards professional development. In the role of openness and adaptability to innovations, which is one of the sub-dimensions of agile leadership, it is underlined that subordinates should be motivated to move towards a radical, different and new future (Doeze Jager-van Vliet, 2017). However, when the literature is examined, it is seen that school principals do not adequately support teachers' professional development (Çalık & Şehitoğlu, 2006). It is considered extremely important to investigate why school principals generally support teachers' professional development at such a low rate.

It was determined that the agile leadership characteristics of school principals perceived by teachers positively affected teachers' performance. When the literature on agile leadership

is examined, it is seen that there is an emphasis on performance. It is underlined that individuals with emotional agility, which is one of the sub-dimensions of agile leadership, can help reduce mistakes, cope with stress, increase workforce and adopt a more innovative perspective (Goleman et al., 2017). It is also stated that there is a moderately positive relationship between learning agility and performance (Yazıcı, 2020). Studies are showing that the productivity, motivation and performance of teachers increase in organizations where teamwork and decision-making processes are used (Lunenburg & Ornstein, 2013). However, while there are many studies on the effect of different leadership styles on teacher performance, no study has been found in terms of agile leadership in the field of educational administration. It is thought that the present study will fill this gap in the literature.

It has been revealed that teachers' attitudes towards professional development positively affect their performance. Abou Assali (2014) states in his study that professional development has an important place in increasing the professional perspective, performance and knowledge of teachers. Considering the impact of teacher performance on school effectiveness and student academic success, it is thought that supporting teacher professional development is of critical importance. For this reason, both school administrators, education politicians and decision makers should focus on the professional development of teachers in order to increase the quality of education.

As a result, in the current study, it is seen that agile leadership characteristics perceived by teachers affect teachers' attitudes towards professional development at a very low and their performances at a higher rate. While the agile leadership characteristics of school principals affect the performance of teachers at a higher rate, why they do not adequately support their professional development should be discussed with the principals and measures should be taken according to the results. Principals should be encouraged to participate in professional development and to support teachers in this field. While there are many studies on the effect of different leadership styles on teachers' professional development and performance, no study has been found in terms of agile leadership in the field of educational administration. For this reason, it can be recommended to conduct more comprehensive studies on the effect of agile leadership on teachers' professional development and performance. In addition, when the studies on the attitude towards professional development were examined, no study was found that included the variables of age and school type. Therefore, it can be recommended to conduct more comprehensive studies on attitudes towards professional development.

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