Examination of the teachers' academic optimism approaches within the framework of teachers' perceptions of learning school

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Abstract

The aim of this study is to determine teachers' academic optimism approaches and learning school perception levels and to examine the relationship between these variables. The sample of the research designed in the relational model consists of 389 teachers selected by cluster sampling method, working in public secondary and high schools in Kocaeli province Izmit district in the 2019-2020 academic year. "School Academic Optimism Scale" and "Learning School Scale" were used in the study. By checking the compliance of the data with normal distribution, t test and one-way ANOVA tests were applied, Pearson correlation coefficient was calculated for the correlation between the variables, simple linear regression analysis and then multiple linear regression analyzes were performed to examine the influence of the predictor variables on the predicted variable. It was seen that academic emphasis and trust are at the forefront of teachers' approaches to academic optimism, while personal dominance and team learning dimensions were at the forefront in their perception of learning school. A positive relationship was found between teachers' approaches to academic optimism and learning school perceptions. It was determined that the sub-factors of the learning school were significant predictors of academic optimism. Teachers' mental models were the sub-factors that affected academic optimism the most.

Keywords: Academic optimism, learning school, teacher

1. Introduction

Academic optimism emphasizes the necessity for teachers to attach importance to scientific information and learning, and the collaboration between parents and students in the learning process. Academic optimism refers to teachers' positive beliefs in their capacity and capability to overcome the challenges they encounter and make a difference

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in students' academic achievement (Hoy, Hoy & Kurz 2008). This term also refers that the teachers focus on academic learning by being aware of their powers and responsibilities, receive parents' and students' supports by prioritizing cooperation, believe in their capacities to overcome the problems they face, and have a positive attitude towards student achievement (Hoy, Tarter & Hoy, 2006). Within the scope of academic optimism, teachers focus on scientific information throughout their professional lives. Students and parents support them, so that they believe they can overcome any challenges. The teachers who consider student success as a priority strive to promote and increase their performances (Hoy, 2006; Solberg, Evans & Segerstrom, 2009). The teachers, who feature academic optimism approaches, have high self-efficacy, enabling them to think that they can make a difference in education and instruction practices. They also consider that the students can successfully learn what their teachers teach. Accordingly, these teachers believe that their students can have a high academic performance (Hoy, Tarter & Hoy, 2006).

Smith & Hoy (2007) pointed to the dimensions of academic optimism (that forefronts the beliefs and approaches to make a difference in student learning and have high academic achievement) as collective efficacy, trust, and academic emphasis. When we consider academically optimistic teachers in terms of these dimensions, we can say that they forefront academic achievement in teaching processes by trusting collaboration with parents and students with the power of this collaboration. Thus, the teachers, who trust in their competencies, believe that the students can overcome all kinds of challenges in learning processes and make a difference at a high level in terms of academic performance (Hoy, Hoy & Kurz, 2008; Beard & Hoy, 2010). When the sense of academic optimism prevails in schools, the value, which teachers and students see, increases. And within the frame of this value, a positive perception regarding the learning of students can develop. Academic learning increases thanks to this perception, and the school can exhibit a continuous learning attitude with all its students and teachers in an organizational sense. The views on the academic topics become the essential considerations in the learning schools where there are close relationships, cooperation and a positive atmosphere and the inclination towards academic optimism increases (Beard & Hoy, 2010). Seligman (2011) indicated that optimism is feasible, learnable, and very likely to become a motivation source for success if improved over time. An optimistic and positive school culture encourages higher levels of student learning by influencing teacher professionalism. And this can help schools turn into learning organisations. Academic optimism positively affects teacher performance, collaboration with colleagues and student achievement (Mascall, Leithwood, Straus & Sacks, 2009). However, the research activities regarding the role of academic optimism in teacher learning as a mediator have continued.

The studies conducted about academic optimism in Turkey show that the teachers approach academic optimism at medium (Kurt, 2018), good (Tepe, 2018) and high (Işık, 2017) levels. The studies conducted point out that academic optimism increases the organisational learning levels of schools and encourages student learning by raising the quality of teaching, and these academic optimism approaches correlate with the learning communities at schools (Işık, 2017; McGuigan & Hoy, 2006; Beard & Hoy, 2010). Schools now represent a learning community for teachers. These learning communities serve as an important tool for professional development. The learning school mechanism affects the teacher practices and student learning by linking the dynamic structure of the school and the teacher attitudes. In this context, the learning school is the product of a quest to raise the quality in educational institutions and emerges as a school with a shared vision, supporting the beliefs, values and norms, and institutional learning regarding learning culture (Çelik, 2000). Learning schools encourage entrepreneurship and risk-taking, regularly examine all issues that affect school activities and create opportunities to ensure continuous professional development (Jokic, Cosic & Sajfert, 2012). Senge (2014) described learning organisation in five dimensions: personal mastery, mental models, shared vision, team learning, and system thinking. As service organisations whose essential purpose is student learning, that devote themselves to teaching and learning, schools should learn far more than other organisations (Hoy & Miskel, 2012). It is because researching existing problems in schools and examining the suggestions produced as solutions, encouraging the creativity, initiatives, and participation in individuals, and using human and material resources effectively and efficiently (Balcı, 2000; Bursalıoğlu, 2015) is only possible if these schools are learning organisations. As a result, based on the related studies (McGuigan & Hoy, 2006; Seligman, 2011; Beard and Hoy, 2010), encouraging the professional development of schools with learning school perception is important in terms of bringing into the open academic optimism of teachers. Despite the findings in the related literature, since there are limited studies on the relationship between the perception of learning school and the academic optimism approach, this study searched for an answer to the question "What is the relationship between teacher perceptions of learning school and academic optimism?".

1.1. The Purpose of the Study

The learning school perception and academic optimism point to the factors that help all students be successful. The teachers who aim at continuous learning and support it with positive beliefs in all stakeholders can offer more positive learning environments to students. In the literature, the studies that examine the learning school perception and academic optimism approach together are limited (McGuigan & Hoy, 2006). Based on these studies discussed, the question "What is the relationship between teacher perceptions of learning school and academic optimism?" constitutes the problem

statement of the research. This study sought answers to the following questions to examine this relationship.

1. What is the level of teacher approaches to academic optimism?

2. Do the academic optimism approaches of teachers differ significantly by gender, school type and seniority variables?

3. What is the level of the teachers' perceptions of learning school?

4. Do the teachers' perceptions of learning school differ significantly by gender, school type and seniority variables?

5. Are teachers' perceptions of learning school a significant predictor of their academic optimism approaches?

2. Method

The design of this study is the relational model, enabling us to examine the relationship between teachers' academic optimism approaches and learning school perceptions. The relational model can be very effective in achieving the goals of descriptive and predictive research and express the complexity that exists in social research (Christensen, Johnson, & Turner, 2015; Cohen, Manion & Morrison, 2007).

2.1. Population-Sample

The study sample consists of teachers selected by cluster sampling method working in public middle schools and high schools in Kocaeli province Izmit district in the 2019-2020 academic year. The cluster sampling method was chosen for two reasons. The first reason is that it is difficult to obtain the framework list of the cluster, while the second is that the selected units are far from each other and scattered, so visiting them one by one is costly (Arıkan, 2001). Cluster sampling is a rewarding method in cases where individuals in the population cannot be listed, but the population is automatically divided into subgroups and individuals falling into these subgroups can be listed (Earl, 2004). The reason why the cluster sampling model was used in the sample selection of this study is that it enabled the selection of the middle and high schools, where academic success is important, by paying attention to the similarity with the population, and then the random selection of the clusters. The study population consists of 2729 branch teachers working in 101 public schools (50 middle schools, 51 high schools) in Kocaeli province in the 2019-2020 academic year. To employ cluster sampling, first, every school in the

research population of the study was accepted as a cluster. To create the sampling, 10 middle schools and 13 high schools were selected randomly from all secondary (lower and upper) schools in Izmit district. The teachers in the sampling received the hand-delivered questionnaires at first. While calculating the necessary number of samples, it was determined that 341 questionnaires would be sufficient with 95% reliability according to the table of Gürbüz & Şahin (2014). Considering the possible losses in the data, 422 data collection tools were distributed, and the data collected from 389 teachers were processed. Demographic data of the participants included in the sample are presented in Table 1.

Table 1. Demographic features of the participants

Variables		F	%
Gender	Female	236	60.67
	Male	153	39.33
	Between 0-10 years	92	23.65
Years of Seniority	Between 11-20 years	143	36.76
	Between 21-30 years	114	29.31
	31 and over	40	10.28

2.2. Data Collection Tools

The first part of the measurement tools consists of demographic questions about genders, school types and seniorities of the participants. In the study, two different measurement tools were used as data collection tools. "Academic Optimism Scale-AOS" was used to determine teachers' academic optimism approaches and "Learning School Scale-LSS" was used to specify the learning school perceptions.

2.2.1 Academic optimism scale

In the study, the version of the "Academic Optimism Scale-AOS" developed by Hoy (2006) and adapted to the Turkish language by Çoban & Demirtaş (2010) was used to determine the academic optimism levels of teachers. This scale, which originally consisted of 30 items in total, was reduced to 19 items as a result of the Turkish adaptation study. The scale has three dimensions. Items 1-2-3-4-5 refer to the self-

efficacy dimension, while items 6-7-8-9-10-11-12 refer to trust, and the items 13-14-15-16-16 17-18-19 point to the academic emphasis. The scale is in a 5-point Likert style, and it includes the rating as Strongly Disagree (1), Partially Agree (2), Moderately Agree (3), Mostly Agree (4), and Strongly Agree (5). On the other hand, the KMO value for the AIS is .89, the Bartlett (X2) coefficient is 2599.14 (p<.001) and the explained variance is 34.14%. While factor loads vary between .24 and .71, Cronbach's Alpha Coefficient was found to be .78. The calculated Cronbach's Alpha Coefficient of the AOS adapted to Turkish by Çoban & Demirtaş (2010) was 0.78. Cronbach's Alpha coefficients have a reliability value over .70, which is an accepted value of AOS in the literature, are consistent with the Cronbach's Alpha Coefficients in the study of Çoban & Demirtaş (2010, and it has become evident that the scale is reliable (Büyüköztürk, 2012; Seçer, 2013).

2.2.2. Learning School Scale

"Learning School Scale-LSS" adapted to the Turkish language by Uğurlu, Doğan **&** Yiğit (2014) and used in this study consists of 20 items and four dimensions. Items 1-2-3-4-5-6-7-8 refer to the team learning dimension, while items 9-10-11-12-13 refer to mental models, items 14-15-16 point to the shared vision dimension, and the items 17-18-19-20 point to the personal mastery dimension. The scale is in a 5-point Likert style, and it includes the rating as Strongly Disagree (1), Disagree (2), Neither Agree Nor Disagree (3), Agree (4), and Strongly Agree (5). The KMO value for the LSS Scale is .94, the Bartlett (X2) coefficient is 6053.55 (p < .001), and the explained variance is 53.69%. While factor loads varied between .54 and .84, Cronbach's Alpha coefficient of the LSS adapted to the Turkish language by Uğurlu et al. (2014) was .95. Cronbach's Alpha coefficients of LSS have a reliability value of over .70, which is accepted in the literature, and the value was consistent with the study of Uğurlu et al. (2014) (Büyüköztürk, 2012; Seçer, 2013).

2.3. Process

Kocaeli University Social Sciences and Humanities Ethics Committee approved the data collection with the letter numbered 10017888-044. During the data collection process, the teachers working in the public middle and high schools in Kocaeli province, Izmit district and included in the sampling were reached and the scales were applied in the 2019-2020 academic year with the approval for application received from Kocaeli Provincial Directorate of National Education.

2.4. Data Analysis

The data obtained from the research were analysed by using the SPSS 26 package programme. The collected data were analysed through frequency, percentage, arithmetic

mean, standard deviation, t-test, variance analysis, correlation, simple linear regression analyses and multilinear regression analyses. In order to check whether the obtained data were suitable for the analysis and whether the regression assumptions were met, average values were assigned to the missing data first and then the normality assumption was tested. While examining the normal distribution, the values of kurtosis and skewness between ±1 make it possible for a measurement to be considered as normally distributed (Tabachnick & Fidell, 2007). The descriptive values, skewness, and kurtosis values of the variables examined in the study are given in Table 2.

Table 2. Skewness, and kurtosis Values of the variables examined in the study

	x̄	Sd	Skewness	Se	Kurtosis	Se
Academic Optimism Approach	2,81	,61	-,14	,12	,65	,24
Self-Efficacy	1,72	,69	,98	,12	,32	,24
Trust	3,29	,67	-,05	,12	-,13	,24
Academic Emphasis	3,38	,75	-,06	,12	-,42	,24
Learning School Perception	3,91	,83	-,76	,12	,22	,24
Team Learning	4,00	,91	-,98	,12	,71	,24
Mental Models	3,74	1,03	-,75	,12	-,23	,24
Shared Vision	3,89	1,01	-,90	,12	,37	,24
Personal Mastery	4,02	,92	-,99	,12	,58	,24

When Table 2 is examined, the skewness and kurtosis values of the scores of academic optimism approaches and learning school perceptions are all within the range of ±1 required for normal distribution. In this case, these measurements were assumed to be normally distributed.

3. Findings

This section includes descriptive statistics about the collected data and the correlation between variables and regression analyses aiming to answer the questions about the problem statement. To examine the academic optimism approaches of teachers, descriptive statistics values were primarily considered. Descriptive statistics values are presented in Table 3.

Table 3. Descriptive statistics about academic optimism approaches of teachers

	x̄	Sd

Academic Optimism	
	2,81 ,61
Self-Efficacy	1,72 ,69
Trust	3,29 ,67
Academic Emphasis	3,38 ,75

n=389

The examination of the results in Table 3 revealed that the general scale averages of academic optimism were = 2.81 (Sd=.61). The scores were X̄ = 1.72 (Sd = .69) for self-efficacy that is one of the sub-factors, and the mean was X̄ = 3.29 (Sd = .68) for the trust sub-factor. Likewise, the mean was X̄ = 3.38 (Sd = .76) in the academic emphasis sub-factor. These two sub-factors (trust and academic emphasis) were at a slightly above-average level. However, self-efficacy sub-factor scores in the academic optimism scale were at a low level.

A t-test was conducted to examine the differentiation of teachers' academic optimism approaches by gender. Analysis results are presented in Table 4.

Table 4. *t-test Results for the Differentiation of Teachers' Academic Optimism Approaches by Gender*

	Gender	N	x̄	Sd	Se	Variance Homogeneity Test F(1, 387)	Df	t	p	Cohen d
Academic Optimism Approach	Female	236	2,53	,62	,04	1,08 p = ,97	387	-3,46	,00	,36
	Male	153	2,75	,61	,04					
Self-Efficacy	Female	236	1,61	,65	,04	3,82 p = ,05	387	-3,86	,00	,40
	Male	153	1,89	,72	,05					
Trust	Female	236	3,22	,67	,04	,152 p = ,69	387	-2,23	,02	,23
	Male	153	3,38	,68	,05					
Academic Emphasis	Female	236	3,34	,75	,04	,36 p = ,54	387	-1,15	,24	,12
	Male	153	3,43	,76	,06					

n= 389, Sd: standard deviation, Se: standard error, Df: degree of freedom

The results of the variance homogeneity test in Table 4 were not significant. Therefore, independent-sample t-test results were reported over values where variances were assumed to be equal. According to the examination of the analysis results, the mean scores of academic optimism (t (397) = -3,46, p < .01, Cohen d = ,36) and its sub-factors, self-efficacy (t (397) = -3,86, p < .01, Cohen d = ,40) and trust (t (397) = -2,23, p < .05, Cohen d = ,23) differed significantly by gender. In addition, when the effect sizes were examined, it was seen that these significant differences were below the medium level (Cohen, Manion ve Morrison; 2007). The most effective dimension was the self-efficacy perception. The academic emphasis sub-factor did not differ significantly by gender (t

(397) = -1.15, p = .24). The examination of these results revealed that male teachers had higher averages in general academic optimism scores and self-efficacy and trust sub-factors than female teachers.

Table 5. *Multi Comparison of Academic Optimism Approaches of Teachers by Seniority*

Variables	(I) Seniority	(J) Seniority	Mean Difference (I-J)	Se
Academic Optimism	Between 0-10 years	Between 21-30 years	-,26999*	,08
		31 and above	-,56951*	,10
	Between 11-20 years	31 and above	-,43466*	,10
	Between 21-30 years	Between 0-10 years	,26999*	,08
		31 and above	-,29952*	,10
		Between 0-10 years	,56951*	,10
	31 and above	Between 11-20 years	,43466*	,10
		Between 21-30 years	,29952*	,10
Trust	Between 0-10 years	31 and above	-,54255*	,12
	Between 11-20 years	31 and above	-,39770*	,12
	Between 21-30 years	31 and above	-,36316*	,12
		Between 0-10 years	,54255*	,12
	31 and above	Between 11-20 years	,39770*	,12
		Between 21-30 years	,36316*	,12
Academic emphasis	Between 0-10 years	Between 21-30 years	-,50711*	,11
		31 and above	-,67516*	,16
	Between 11-20 years	Between 21-30 years	-,57366*	,11
		31 and above	-,74171*	,16
	Between 21-30 years	Between 0-10 years	,50711*	,11
		Between 11-20 years	,57366*	,11
	31 and above	Between 0-10 years	,67516*	,16
		Between 11-20 years	,74171*	,16

* p < .05

Findings in Table 5 revealed that the academic optimism average scores of teachers with a seniority of 0-10 years were lower than those of teachers with a seniority of 31 years and above and the teachers with seniority between 21-30 years. The academic optimism averages of the teachers with a seniority of 31 and above were significantly higher than the perception scores of the teachers with seniority of fewer than 31 years. The examination of the mean differences revealed that the averages of teachers with higher seniority regarding academic optimism approaches were higher than those with lower seniority.

Table 6. *t-test Results for the Differentiation of Teachers' Academic Optimism Approaches by School Type*

	School Type	n	X̄	Sd	Se	Variance homogeneity test F(1, 387)	Df	t	p	Cohen d
Academic Optimism Perception	Middle School	130	3,03	,75	,06	32,296 p = ,080	387	4,65	,000	,57
	High School	259	2,69	,48	,03					
Self-Efficacy	Middle School	130	1,73	,70	,06	,023 p = ,879	387	,12	,899	,014
	High School	259	1,72	,68	,04					
Trust	Middle School	130	3,49	,66	,05	,493 p = ,483	387	3,52	,000	,38
	High School	259	3,22	,70	,04					
Academic Emphasis	Middle School	130	3,67	,74	,06	8,935 p = ,053	387	2,36	,019	,24
	High School	259	3,47	,92	,05					

n= 389, Sd: standard deviation, Se: standard error, Df: degree of freedom

According to the variance homogeneity test results in Table 6, independent-sampling t-test results regarding academic optimism perception and self-efficacy dimension were reported over the values which variances were assumed as equal while the t-test results regarding trust and academic emphasis were reported over the values which variances were not assumed equal.

Table 7. *Descriptive Statistics of the Learning School Perception of Teachers and Its Sub-Factors*

	x̄	Sd
The Perception of Learning School	3,91	,83
Team Learning	4,00	,91
Mental Models	3,74	1,03
Shared Vision	3,89	1,01
Personal Mastery	4,02	,92

Table 7 showed that the learning school perception of teachers was at the level of X̄ = 3,91 (Sd=,83). As for sub-factors, team learning was at the mean value of X̄ =4,0 (Sd =,91), personal mastery was at the mean value of X̄=4,02 (Sd=,92) while the mean value of mental models was X̄=3,74 (Sd =1,03) and it was X̄=3,89 (Sd=1,01) for shared vision. These results show that the learning school perceptions of teachers are positive and at a high score level. Considering the sub-factors, teachers' opinions about the learning school mostly concentrated on personal mastery. In the second place, they emphasized team learning as a characteristic of the learning school. Then, they considered that the shared vision and the mental models were also a part of the learning school besides other factors

(personal mastery and team learning). However, they considered that shared vision and mental models were not as weighted as personal mastery and team learning.

Table 8. *t-Test Results for the Differentiation of Teachers' Learning School Perceptions by Gender*

	Gender	n	x̄	Sd	Se	Variance homogeneity test F(1, 387)	Df	t	p
Learning School	Female	236	3,90	,84	,05	,079	387	-,361	,719
	Male	153	3,93	,80	,06	p = ,778			
Team Learning	Female	236	4,01	,94	,06	1,885	387	,077	,939
	Male	153	4,00	,86	,07	p = ,171			
Mental Models	Female	236	3,67	,99	,06	2,048	387	-1,43	,152
	Male	153	3,83	1,09	,08	p = ,153			
Shared Vision	Female	236	3,91	1,03	,06	,609	387	,427	,670
	Male	153	3,87	1,00	,08	p = ,436			
Personal Mastery	Female	236	4,01	,93	,06	,197	387	-,234	,815
	Male	153	4,04	,91	,07	p = ,657			

n= 389, Sd standard deviation, Se standard error, Df degree of freedom

The variance homogeneity test results in Table 8 were not significant for any perception score. According to the results, the variances of the learning school and sub-factor scores did not differ by gender. For this reason, independent-sample t-test results of all scores were reported over t values where variances were assumed equal. Analysis results showed that the mean scores of learning school (t (387) = -,361, p = ,719) and its sub-factors (team learning: t (387) = ,077, p = .939, mental models: t (387) = -1,435, p = .152, shared vision: t (387) = ,427, p = ,670 and personal mastery: t (387) = -,234, p= ,815) did not differ significantly by gender. These results exhibited that the gender of teachers did not have any significant effect on the learning school perception and its sub-factors.

Table 9. *Multi Comparison of Learning School Perceptions of Teachers by Seniority*

Variances	(I) Seniority	(J) Seniority	Mean Difference (I-J)	Se
Learning School	Between11-20 years	Between 21-30 years	-,28439*	,097
	Between 21-30 years	Between11-20 years	,28439*	,097
Team Learning	Between 11-20 years	31 and above	-,45234*	,141
	31 and above	Between11-20 years	,45234*	,141
	Between 11-20 years	Between 21-30 years	-,35037*	,131
Mental Models	Between 21-30 years	Between11-20 years	,35037*	,131

* p < .05

The results in Table 9 showed that the teachers with 11-20 years of seniority had significantly lower mean scores than the teachers with 21-30 years of seniority regarding learning school perceptions. Apart from this, there was no significant difference between

the other seniority ranges. In this case, teachers with 21-30 years of seniority had a more positive approach to learning school concept than the teachers with 11-20 years of seniority. As for the learning school perception sub-factors, there were significant differences between the seniority year ranges in terms of team learning and mental models. In team learning perception, teachers with 31 or more years of seniority have a significant and higher mean perception score than the teachers with 11-20 years of seniority. That means that the teachers with 31 or more years of seniority have a more positive perception of team learning than the teachers with 11-20 years of seniority. In the mental models, a situation similar to the learning school perceptions arose, and the reason for this significant difference was that the teachers with 21-30 years of seniority had a higher perception score than the teachers with 11-20 years of seniority. The evaluation of this result is as it was in the interpretation of the learning school perception score.

Table 10.*t-Test Results for the Differentiation of Teachers' Learning School Perceptions by School Type*

	School Type	n	x̄	Sd	Se	Variance homogeneity test F(1, 387)	Df	t	P	Cohen d
Learning School	Middle School	130	4,11	,72	,06	5,717	387	3,559	,000	,36
	High School	259	3,82	,86	,05	p = ,017				
Team Learning	Middle School	130	4,20	,73	,06	9,347	387	3,341	,001	,33
	High School	259	3,91	,97	,06	p = ,002				
Mental Models	Middle School	130	3,95	,89	,07	7,212	387	3,113	,002	,31
	High School	259	3,63	1,08	,06	p = ,008				
Shared Vision	Middle School	130	4,13	,87	,07	4,439	387	3,556	,000	,36
	High School	259	3,77	1,06	,06	p = ,036				
Personal Mastery	Middle School	130	4,16	,84	,07	2,435	387	2,028	,043	,22
	High School	259	3,95	,96	,05	p = ,119				

Note. n= 389, abbreviations of the terms: Sd standard deviation, Se standard error, Df degree of freedom

The results of the variance homogeneity test in Table 10 were not significant for the personal mastery sub-factor. The results were significant for the learning school, team learning, mental models, and shared vision. For this reason, the independent-sample t-test results for personal mastery were reported over the values where variances were assumed as equal, and for all other perception scores, variances were not assumed to be equal. According to the analysis results, the mean scores of learning school perception (t (387) = 3,559, p < .01, Cohen d = .36) and its sub-factors; team learning (t (387) = 3.341, p < .01, Cohen d = .33), mental models (t (387) = 3.113, p < .01, Cohen d = .31), shared vision (t (387) = 3.556, p < .01, Cohen d = .36), and personal mastery (t (387) = 2.028, p <

.05, Cohen d = .22) differ significantly by school type. In addition, according to the effect sizes (Cohen d), these significant differences were close to the moderate for learning school, team learning, mental models and shared vision, and the value related to personal mastery was close to low.

Considering the mean values obtained and the meaningful results regarding the learning school sub-factors, teachers working in educational institutions like middle schools have more positive opinions than teachers working in upper secondary education institutions. These positive opinions are more prominent in general learning school perception and shared vision sub-factor. The sub-factor with the least significant difference in these two school types is personal mastery. As a result, the learning school perceptions of middle school teachers are higher than those of high school teachers.

Table 11. *The Results for the Correlation Between the Mean Perception Scores of Academic Optimism Perceptions of Teachers and Learning School Sub-Factors*

	1	2	3	4	5	6	7
Self-Efficacy							
Trust	,486**						
Academic Emphasis	,465**	,668**					
Team Learning	,350**	,430**	,473**				
Mental Models	,202**	,339**	,485**	,604**			
Shared Vision	,311**	,328**	,505**	,693**	,812**		
Personal Mastery	,156**	,379**	,431**	,618**	,597**	,571**	

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

According to the results in Table 11, all the correlations between the sub-factors of academic optimism and learning school perceptions were significant. The correlation of self-efficacy perception with team learning is moderately positive (r = .350, p < .01), low positive with mental models (r = .202, p < .01), moderately positive with shared vision (r = ,311, p < .01) and low positive with personal mastery (r = .156, p < .01). When teachers' self-efficacy perception increases, learning school perception sub-factors also increase. While this increase is higher in team learning, it is respectively lower in shared vision, mental models, and personal mastery. The correlation of trust perception with team learning is moderately positive (r = ,430, p < .01), it is moderately positive with mental models (r = ,339, p < .01), moderately positive with shared vision (r = ,328, p < .01) and moderately positive with personal mastery (r = ,379, p < .01). When teachers' perception of trust increases, the learning school perception sub-factors also increase. While this increase is higher in team learning, it is respectively at a lower level in personal mastery, mental models, and shared vision. The correlation of academic emphasis perception with team learning is moderately positive (r = ,473, p < .01), it is moderately positive with

mental models (r = ,485, p < .01), moderately positive with shared vision (r = ,505, p < .01), and moderately positive with personal mastery (r = ,431, p < .01). When teachers' perception of academic emphasis increases, the learning school perception sub-factors also increase. While this increase is higher in the shared vision, it is respectively at a lower level in mental models, team learning and personal mastery.

Multiple linear regression analysis was run regarding the predictors of teachers' learning school perception and its sub-factors on teachers' academic optimism approaches. Multicollinearity values, one of the greatest challenges experienced in multiple linear regression, were also evaluated during the analysis. Table 12 shows the correlation table calculated for multicollinearity. In the results in Table 11, there was no correlation coefficient value above ,800 between the learning school and its sub-factors to be included in the regression analysis (Çokluk, Şekercioğlu & Büyüköztürk, 2012; Field, 2017). A significant model including all predictive variables was obtained at the end of the multiple regression analysis, $F(4, 384) = 17,345$, $p < .001$. The learning school and its sub-factors could explain 15% of the variance of academic optimism. The coefficients and multicollinearity values for this model are given in Table 12.

Table 12.*Regression Coefficients Regarding the Predictors of Teachers' Learning School Perceptions and Its Sub-Factors on Academic Optimism*

	Unstandardised Coefficients		Standardized Coefficients	t	p	Multicollinearity Statistics	
			B				
	B	Se				Tolerance	VIF
Constant	2,03	,10		19,289	,000		
Team Learning	,07	,03	,164	2,494	,013	,512	1,952
Mental Models	,08	,03	,202	2,414	,016	,314	3,185
Shared Vision	,05	,02	,110	2,295	,022	,283	3,528
Personal Mastery	,08	,03	,186	2,985	,003	,565	1,769
Learning School	,14	,04	,265	3,388	,001	,364	2,748

N = 389, R = ,391, R^2 = 153, Corrected R^2 = ,144

Regression model coefficients showed that learning school positively predicted academic optimism at a significant level (B = ,141, p < .01). In the light of this result, when all other factors remain constant, it can be expected that a one-point increase in the perception of learning school will have an effect as an increase of ,141 points in the academic optimism perception score. The results regarding the sub-factors of the learning school showed that team learning (B = .079, p < .05), mental models (B = .086, p < .05), personal mastery (B = .089, p < .01), and shared vision (B = .056, p < .05) had a

significant and positive predictive effect. Standardized coefficient values were examined to compare the effects of significant sub-factors with each other. The highest standard coefficient values were found as mental models (β = .202), personal mastery (β = .186), team learning (β = .164) and shared vision (β = .110) respectively. In this case, it can be interpreted that the mental models of teachers are the sub-factors that affect academic optimism the most.

4. Discussion, Conclusion and Recommendations

In this study, it was seen that teachers' perception levels of academic optimism had an average of X̄=2.81 (Sd=.61). Çoban & Demirtaş (2011) reached the finding in their study on the academic optimism of schools that the teachers mostly saw themselves as sufficient. Hoy and Tschannen (1999) emphasize that teachers' academic optimism levels are high. It is because that they are aware of their beliefs that they will be successful, and their knowledge level is sufficient and open to improvement. From this point of view, teachers could be expected to have a high level of academic optimism since academic optimism is an essential concept reflecting the opinions of teachers on student learning, improving teaching and learning at schools, taking responsibility for the teaching process and its outcomes, and working in collaboration with other school stakeholders (Hoy & Tarter, 2006). However, other studies also support that while the academic optimism approach is generally at a high and favourable level at the primary education level, this approach is at a moderate level at the middle and high school levels (Yalçın, 2013).

Academic optimism levels of female and male teachers were found to be similar. As for Academic Optimism general average, self-efficacy and trust scores, males had higher perception scores than females in all three titles. This result can be interpreted as that male teachers have a better sense of academic optimism and its sub-factors: self-efficacy and trust. In terms of academic emphasis, it is possible to say that the levels of male or female teachers are the same. In his study on school academic optimism, Çağlar (2014) found the average scores of female teachers higher in the sub-factors: self-efficacy and trust.

Findings show that the teachers working in middle schools had a higher perception of academic optimism and its sub-factors: trust and academic emphasis. The most significant differentiation is in academic optimism. In terms of self-efficacy, teacher perceptions do not change by school type. According to the research findings, as seniority level increases, academic optimism levels of teachers also increase. Çoban (2010) and Çağlar (2014) also concluded in their study that the academic optimism levels of teachers with high years of seniority are higher than the teachers with fewer years of seniority.

According to the research findings, the average value of teachers' perception of learning school was at the level of X̄=3.91(Sd=.83). The teachers' perceptions of learning school were at a positive level. The findings of the research are similar to the findings of Hunt (2012), Bal (2011), Şanal (2009), Jokic, Cosic & Pardanjac (2012), Şen (2019), Güçlü & Türkoğlu (2003), Doğan & Yiğit (2015). As for the sub-factors, team learning was at the mean score of X̄= 4.0 (Sd=.91) and personal mastery at the mean score of X̄= 4.02 (Sd=.92); mean score of mental models was X̄=3.74 (Sd=1.03) and of shared vision was X̄=3.89 (Sd=1.01). Considering the sub-factors, teachers' views on learning school mostly focus on personal mastery, secondly on team learning, then on shared vision, and finally, they think that mental models are a part of the learning school as well, but it is possible to interpret that mental models are not as weighted as other factors. Considering that the personal mastery sub-factor emphasizes using personal skills and self-development, teachers perceive themselves as sufficient for personal development. Besides, the finding that other dimensions point to partially low means shows similarity with some studies (Silins, Zarins & Mulford, 2002; Stoll & Fink, 1996).

According to the findings of the research, it is possible to state that the teacher genders do not have any significant effect on the perception of learning school and its sub-factors. In the literature, studies reveal that the gender variable does not differentiate the perception of learning school (Aydemir, 2018; Tuna, 2014). According to the analysis results, teachers with 11-20 years of seniority had significantly fewer points in learning school perceptions than teachers with 21-30 years of seniority. Apart from this, there is no significant difference between the other years of seniority. In this case, it is possible to interpret that teachers with 21-30 years of seniority have a more positive approach to learning school than teachers with 11-20 years of seniority.

Research findings indicate that the types of schools in which the teachers work affect learning school and its sub-factors. Especially, it can be interpreted that the presence of middle school teachers in these institutions increases the learning school understanding. Factors such as more sincere teacher-student relationships because students are younger may have caused teachers in middle schools to be more involved in the sub-factors; mental models, shared vision, and systems thinking of the learning school., Kılıç (2009) states in his study on teachers working in primary schools that classroom teachers help and interact with each other more than branch teachers. Considering these findings, it is possible to express that the branches of the teachers do not have any influence on their views on the learning school and its sub-factors. The findings of a study conducted by Şen (2019), Tuna (2014) and Subaş (2010) support the findings of this study.

The findings of this study also indicate that the correlation between the sub-factors of academic optimism and learning school perceptions were positively significant, and the learning school perception predicted academic optimism and its sub-factors. Limited

studies conducted in the literature also point out that academic optimism is correlated with the learning environment in school (McGuigan & Hoy, 2006; Kulophas & Hallinger, 2020).

On the other hand, in this study, self-efficacy, one of the sub-factors of academic optimism, is low compared to other dimensions. That can be seen as a factor that may negatively affect academic optimism. As a matter of fact, studies emphasize that teacher self-efficacy can affect professional learning (Kılınç, Polatcan, Atmaca & Koşar, 2020; McGuigan & Hoy, 2006).

The following recommendations have been developed based on the obtained findings for researchers and practitioners in this study which examines the relationship between academic optimism approaches of teachers and their learning school perceptions. Considering the research findings, student-centred approaches can be adopted to improve academic optimism approaches of teachers in schools and guidance works can be carried out to take academic optimism approaches of teachers to a higher level.

Research findings indicate that male teachers had a more optimistic approach academically than female teachers, and their self-efficacy and trust scores were higher. Starting from this point, for female teachers, school administrations can plan activities engaging stakeholders to improve female teachers' academic optimism approaches, self-efficacy, and trust, and increase their motivations.

As the years of seniority increase, teachers get to know about the school, parents, students, and the school culture better. From this point of view, orientation training and mentoring activities can be provided so that teachers with less seniority will spend less time on routines. Since the learning school perception in high schools is lower than in middle schools, more teamwork can be included in high school activities.

According to the findings of this study, mental models, one of the sub-factors of the learning school, are the sub-factors that affect teachers' academic optimism approaches the most. From this point of view, it can be ensured that teachers participate in project works that increase their learning, reveal the designs, beliefs, and emotional states in their minds, and enable them to use their potential.

Based on the views of school administrators and teachers, studies can be conducted on what kind of activities and implementations can be carried out to improve teachers' academic optimism approach and its sub-factors. Research activities can be conducted to examine the academic optimism approaches of female teachers in-depth and strengthen their academic approaches.

Since this study has reached a conclusion that the academic optimism approaches and learning school perceptions of teachers working in the middle schools are higher than those of teachers working in high schools, research activities can be conducted on the factors which differentiate academic optimism approaches and learning school perceptions of teachers working in different school types.

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