

## CHAPTER 3

# THE RELATIONSHIP BETWEEN ATTITUDES TOWARDS SCHOOL AND GENERAL SELF-EFFICACY: THE MODERATION EFFECT OF LEVEL OF EDUCATION

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### INTRODUCTION

Students are expected to reach pre-determined goals in the cognitive, affective, and psychomotor domains through planned practices of teaching at schools (Ertürk, 1991) However, it is seen that the outcomes obtained from instruction do not always occur at the desired level, students may have difficulty in reaching the expected educational goals, and they fail to demonstrate the desired achievement in international exams (Taş et al., 2016; Yıldırım et al., 2016) Several measurements are taken, considerable changes are made in curricula, and teacher competencies are improved in order to enhance student achievement (Ministry of National Education [MoNE], 2009a, 2009b, 2017; Muñiz, 2020) In this respect, many professional development programs are also employed for teachers in line with the updated curricula (Ministry of National Education [MoNE], 2013, 2015) In addition to updating the curricula and teacher competencies, it is important to examine the variables that are effective on students'

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school life and academic achievement to increase the efficiency of educational practices. This may help meet the instruction principle based on the learner (Ertürk, 1991). In this regard, studying the variables affecting students' academic achievement and affective characteristics towards school would be beneficial. Many researchers associate attitudes towards school with such variables as students' academic achievement, school attendance rates, peer relationships, peer bullying, positive teacher-student interaction, and school motivation (Alici, 2013; Cheng & Chan, 2003; İlhan, 2017; Veas et al., 2017) Attitudes towards school are formed by students' positive or negative feelings, opinions and behaviors related to school and affect their school motivation and self-regulation skills (Eagly & Chaiken, 2007; Stern, 2012) Students with a positive attitude towards school are seen to have better learning motivation and self-regulation skills while students' self-regulation skills decrease when they are not motivated, which in turn affects their school achievement negatively (Stern, 2012) Moreover, attitudes towards school also influence students' school attendance, and students with a positive attitude towards school have lower absence rates (Adıgüzel & Karadaş, 2013).

In addition to attitudes towards school, self-efficacy perceptions are positively correlated with students' academic achievement, self-respect, self-regulation skills, school engagement, and attitudes (Aktamiş et al., 2016; Asakereh & Yousofi, 2018; Erdoğan & Yüzbaş, 2018; Lee et al., 2014; Serpil Yorgancı, 2017). On the other hand, self-efficacy is negatively related to anxiety (Tuncer & Akmençe, 2019), and it is important to examine students' attitudes toward school and self-efficacy that affect their academic achievement and many other school-related affective characteristics. The present study aimed to examine secondary school, high school, and university students' attitudes towards school, their self-efficacy perceptions, and the

relationships between these variables in terms of education and gender. Also, the level of education was examined as a moderator for the relationship between attitudes towards school and general self-efficacy.

### **Attitude toward School**

The related literature includes a variety of studies on attitudes towards school. One of the variables to be effective in attitudes towards school is gender. Many researchers state that attitudes towards school vary by gender, and most of them report that females hold more positive attitudes towards school than males (Adıgüzel & Karadaş, 2013; Erkman et al., 2010; Marks, 1998; Veas et al., 2017). However, Cheng & Chan, (2003) found higher attitudes towards school in males, which was associated with the tradition of more pressure for academic success on men than women in the Chinese culture. Başaran & Yıldırım (2017), on the other hand, reported no relationship between attitudes towards school and gender.

In addition to gender, level of education is also an influential factor in attitudes towards school. Wigfield et al. (1997) report that compared to secondary and high school students, primary school students show more interest in school-related tasks and find them more meaningful. On the other hand, Entwisle et al. (2005) state that one-third of high school students lose their interest in school, show less persistence in fulfilling school-related tasks and are less willing to obey the school rules. Stern (2012), claims high school students generally find school meaningless and think working hard has very little related to their future. It is seen that students who think what they learn in class is not related to real-life have low attitudes toward school and are less motivated for academic success (Willingham, 2009). Similarly, Cheng and Chan (2003) found that younger students held more positive attitudes toward school. To sum up, it can be understood that attitudes towards

school vary by level of education; they are negatively affected as they level up, and students begin not showing interest in school-related tasks and find these tasks useless (Entwisle et al., 2005; Gottfredson, Marciniak, Birdseye, & Gottfredson, 1995; Stern, 2012; Wigfield et al., 1997).

Another variable considered effective in attitudes towards school is school engagement (Jenkins, 1997; Özdemir, 2017; Stern, 2012). Such concepts nourish school engagement as the sense of belonging to the school and school commitment. This feeling manifests in the sense of belonging to the school, belief, obedience to the school rules, and respect for teachers (Jenkins, 1997). Many researchers state that students participating in extracurricular activities have higher school engagement levels (Gottfredson et al., 1995; Uyan, 2013). Since student clubs and sports activities are not compulsory, students choose to spend their free time joining in such school-related activities and have stronger connections with school, while students with weaker school engagement do not prefer to participate in these activities (Stern, 2012). Likewise, Uyan (2013) suggests that voluntary music education positively affects students' attitudes toward school.

Teacher characteristics are another variable that is thought to affect students' attitudes towards school (Gottfredson et al., 1995; Stern, 2012). Teachers' friendly approaches and student-teacher interaction affect interest in and attitudes towards school positively (Gottfredson, Cross, Wilson, Rorie, & Connell, 2010). Students who think teachers and peers support them seem to feel more academically responsible and hold more positive attitudes towards school as well as acting according to the rules (Wentzel & Caldwell, 1997). Jenkins (1997) also claims that students who find school rules fair and reasonable have more positive attitudes towards school. Similarly, according to Mok and Flynn (2002), students' in-class experiences are highly effective in

their school-related quality of life. The classroom atmosphere, which is mostly shaped by teacher behavior, affects attitudes towards school as well. In order to enhance positive attitudes towards school, the classroom atmosphere must include rich learning materials easily accessible by the student. In addition, mutual support and relationships that help the learners in class trust each other; and academic support provided by the teacher on learning and motivation basis both at individual and group levels may improve attitudes towards school (Mok & Flynn, 2002; Stern, 2012) In addition to an organized classroom setting, when teachers create an atmosphere that promotes safe and positive interpersonal relationships, they can enhance attitudes towards school (Mok & Flynn, 2002; Stern, 2012) Evaluation approaches employed in the class by teachers may as well be effective on students' attitudes towards school. While a learning-oriented evaluation atmosphere is positively related to students' attitudes towards school, a performance-oriented evaluation approach has a negative relationship (İlhan, 2017) Teachers' expectations is also one of the important factors that influence students' attitudes towards school (Gottfredson et al., 2010) Gottfredson et al. (2010) state that students perceive their teachers' low expectations and act accordingly. According to Rosenthal and Jacobson (1968), teachers first set expectations from their students in this process, and later students comprehend the clues reflecting their teachers' expectations and act in this direction. Then, student performances come out in line with these expectations. Thus, low-grade averages affected by teacher expectations is one of the strongest determiners of attitudes towards school (Jessor et al., 1995; Stern, 2012; Veas et al., 2017). In other words, students with a moderate and high level of achievement hold higher attitudes towards school than those with low achievement (McCoach & Siegle, 2003). However, Marjoribanks (1992) reports that attitude towards school has a moderate effect on females' academic

achievement, whereas it does not affect males' achievement.

### **General Self-Efficacy**

Self-efficacy is the belief that individuals are capable of exercising control over the events that affect their lives. In other words, it can be defined as individuals' beliefs in their performance. Self-efficacy beliefs affect how individuals feel, think, be motivated and behave (Bandura, 1994). Individuals' self-efficacy perceptions are seen to be significantly correlated with their attitudes (Baltacı, 2004; Emre & Ünsal, 2017; Özokcu, 2018; Sani & Zain, 2011; Serpil Yorganci, 2017) Baltacı (2004) claims that perceived self-efficacy of school administrators is effective on their attitudes towards profession. Emre & Ünsal (2017) state that secondary school teachers' self-efficacy is a meaningful predictor of their attitudes. Özokcu (2018) claims that teacher self-efficacy significantly predicts their attitudes towards inclusive education. According to Wu & Tsai (2006), university students' internet self-efficacy is highly correlated with their attitudes towards the internet. Although significant relationships have been reported between self-efficacy and attitude in many fields, no study has examined students' attitudes towards school and their general self-efficacy at secondary, high, and university levels. Therefore, it is important to examine how general self-efficacy relates to attitudes towards school at different levels.

There are several variables concerning students' self-efficacy, one of which is gender (Aypay, 2010; Bonsaksen et al., 2019; Hodačová et al., 2020). Many studies show that men's general self-efficacy scores are higher than those of women (Aypay, 2010; Bonsaksen et al., 2019; Wang et al., 2019). On the other hand, several studies report no relationship between gender and general self-efficacy (Uysal, 2013). As for age, Bonsaksen et al. (2019) state that general self-efficacy does not vary by age, while Aktamış et al. (2016) claim that secondary school students' self-

efficacy perceptions improve as their grade level gets higher. Chen, Björkman, Zou, and Engström (2019) report that third-year students at universities hold lower self-efficacy perceptions than second-year students.

Besides gender and age, general self-efficacy positively correlates with many positive affective characteristics. These include life satisfaction, self-esteem, communication skills, and brief resilience (Capri et al., 2012; Orkaizagirre-Gómara et al., 2020; Poorbaferani et al., 2018). On the other hand, general self-efficacy has negative correlations with many affective characteristics that can be considered negatory. These can be listed as stress, burn-out, and anxiety (Capri et al., 2012; Orkaizagirre-Gómara et al., 2020). Students with high general self-efficacy experience lower anxiety, stress, and less burnout. Students' self-efficacy is correlated with many school-related traits as well. Some of them are self-regulated learning and metacognitive abilities, and students with higher self-efficacy have higher scores on both self-regulated learning and metacognitive abilities (Chen et al., 2019).

Another variable correlated with students' general self-efficacy is school engagement (Erdoğdu & Yüzbaşı, 2018). Students who have higher general self-efficacy love school more, want to take more part in school activities, and better embrace the goals and values of the school (Erdoğdu & Yüzbaşı, 2018). Many studies report a significant positive relationship between general self-efficacy and academic achievement (Aktamış et al., 2016; Asakerah & Yousofi, 2018). Nevertheless, according to Tang and Westwood (2007), there is no relationship between general self-efficacy and academic achievement. Individuals' self-efficacy perceptions and attitudes are also positively correlated (Baltacı, 2004; Emre & Ünsal, 2017; Özokcu, 2018; Serpil Yorgancı, 2017).

As one can see, the related literature includes a variety of studies

examining the effects of teacher behavior, learning environment, gender, and level of education on attitudes towards school and general self-efficacy (Cheng & Chan, 2003; Marjoribanks, 1992; Mccoach & Siegle, 2003; Stern, 2012) While studies are looking into the relationship of attitudes towards school and general self-efficacy with such variables as academic achievement and gender (Adıgüzel & Karadaş, 2013; Başaran & Yıldırım, 2017; Erkman et al., 2010; İlhan, 2017; Uyan, 2013), no study has been found on the effect of level of education from secondary school to university on attitudes towards school and general self-efficacy. In addition, no study has been found to examine the moderator effect of level of education on the relationship between attitudes towards school and general self-efficacy.

### **The Aim of the Study**

The present study aimed to examine the relationships between secondary school, high school, and university students' attitudes towards school and general self-efficacy in terms of the level of education and gender. To this end, answers were sought for the following research questions.

1. Do secondary school, high school, and university students' attitudes towards school and general self-efficacy scores vary by level of education and gender?
2. What is the moderating role of the level of education in the relationship between attitudes towards school and general self-efficacy?

### **The Significance of the Study**

Students' attitudes towards school and their general self-efficacy are closely related to many variables like academic achievement, school engagement, self-regulated learning, and metacognitive learning. A positive attitude towards school and high general self-efficacy levels not only reduce the risk of school dropout



but also promote learning motivation, increase students' school attendance rates and improve academic achievement (McCoach, 2000; Veas et al., 2017). The present study aims to determine the attitudes towards school and general self-efficacy levels of students at different levels of education through a cross-sectional survey and to examine the moderating effect of the level of education on the relationship between these two variables. Therefore, the study is important in understanding the existing situation and leading the way for future studies. The data obtained from the study might help offer recommendations to make evidence-based decisions in designing and implementing curricula. Thus, the study is expected to make a scientific contribution to instruction's planning and implementation processes.

There are many studies about the results of training on attitudes (Uyan, 2013), the correlations between attitudes towards school and other variables (Kaya & Sezgin, 2017; Özdemir, 2017), the effects of assessment atmosphere on attitudes towards school (İlhan, 2017) and the effects of school attitudes on academic achievement (Adıgüzel & Karadaş, 2013; Başlantı, 2002; Erkman et al., 2010) Although some studies state level of education affects attitudes towards school (Cheng & Chan, 2003; Entwisle et al., 2005; Stern, 2012; Wigfield et al., 1997) no study has been found to examine how school attitudes vary by secondary school, high school, and university levels. General self-efficacy, on the other hand, has been studied concerning many variables like gender, life satisfaction, and school engagement (Erdoğan & Yüzbaş, 2018; Hodačová et al., 2020; Wang et al., 2019) While there are studies examining whether general self-efficacy varies by age or grades at a single level of education (Aktamış et al., 2016; Bonsaksen et al., 2019; Chen et al., 2019); no study has looked into general self-efficacy at secondary school, high school and university levels. In addition, while some studies examine the relationship between self-efficacy and attitude broadly (Baltacı,

2004; Emre & Ünsal, 2017; Özokcu, 2018; Serpil Yorganci, 2017), no study has been found on the moderating role of the level of education in the relationship between general self-efficacy and attitudes towards school. Thus, the present study is expected to significantly contribute to the literature.

## **Method**

The study was conducted as a cross-sectional survey. The study population comprises a secondary school, high school, and university students studying within the borders of İzmir Metropolitan municipality. Using a stratified sampling method, approximately 200 students were included in the study from the sixth, eighth, ninth, eleventh grades, and first and fourth years at the university level. In this regard, sixth (n=175) and eighth (n=185) graders who are likely to get into the formal cognitive operational stage at the secondary education level and ninth (n=248) and eleventh graders (n=246) –twelfth graders were excluded due to exam pressure- at the high school level were included in the study. At the undergraduate level, first (n=189) and fourth (n=239) year students were included to see the situation at the start and the end of university education. In addition, one school was selected from the upper, middle, and lower socio-economic levels at the secondary education level. As for high schools, one Anatolian high school was chosen from each of the high, medium, and low score groups according to high school entrance scores. In addition, university students were selected from among the undergraduate students studying in different departments of the faculty of education and attending the pedagogical formation certificate program.

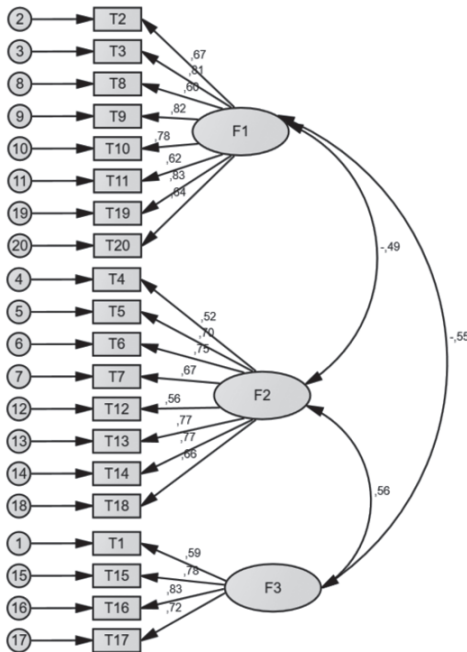
## **Data Collection Instruments**

### ***Attitude Scale Towards School***

The Attitude Towards School Scale was developed by Alici (2013)

to use with high-school students. The scale consists of twenty items and three components. The components are titled “School as a Barrier to Personal Development”, “School as a Supportive of Personal Development,” and “School as an Entity to be Longed For”. The responses to the five-point Likert type scale range from “Strongly Disagree” to “Strongly Agree”. The maximum possible score to be obtained from the scale is 100, while the minimum score is 20. The Alpha reliability coefficients of the first, second, and third sub-components were found as .87; .81 and .79, respectively. The confirmatory factor analysis results showed that the goodness fit indexes were within the acceptable range. In the present study, the Alpha reliability coefficients of the three sub-components were calculated as .89, .88, and .81. The psychometric properties of the scale were tested for undergraduate students by Author (2018) In the light of the data obtained from 771 undergraduate students, confirmatory factor analysis was performed, and the scale was seen to apply to undergraduate students (RMSEA: .074, CFI: .91, SRMR: .049).

The appropriateness of the psychometric properties of the Attitude Scale towards School for secondary school students was examined with CFA in the present study. The goodness-of-fit indexes are presented in Table 1, and the standardized values are shown in Figure 1. The Coefficient Alpha reliability values are presented in Table 2. The scale’s psychometric properties were also shown to be appropriate for secondary school students.

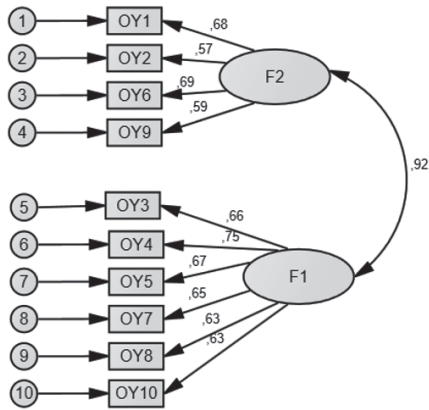


**Figure 1:** Confirmatory Factor Analysis Model for the Sample of the Attitude Scale towards School (Standardized Values)

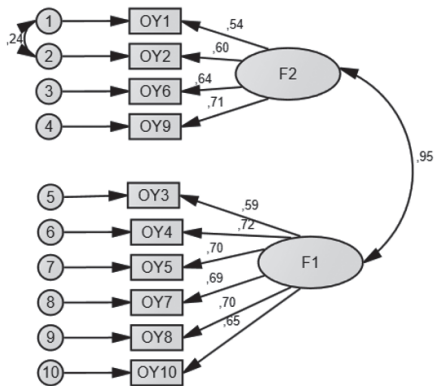
### **General Self-Efficacy Scale**

The General Self-efficacy Scale (GSE) was developed by Schwarzer and Jerusalem and adapted to more than 25 languages (Aypay, 2010; Scholz et al., 2002). The cultural adaptation of the scale into Turkish was conducted by Aypay (2010) with a sample of preservice teachers. The original single-dimension scale consists of 10 items (Scholz et al., 2002). Total scores can be obtained over the scale, with low scores showing low general self-efficacy and high scores high general self-efficacy (Aypay, 2010) Aypay (2010) states that the Turkish form of the scale consists of 10 items and two dimensions. The appropriateness of the psychometric properties of this scale for secondary school and high school

students was evaluated in the present study. The goodness of fit indexes obtained from the CFA are shown in Table 1, and the standardized values are presented in Figure 2. The Coefficient Alpha reliability values are presented in Table 2. The psychometric properties of the scale were also appropriate for secondary and high school students.



**Figure 2:** Confirmatory Factor Analysis Model for the General Self-Efficacy Scale (Secondary School - Standardized Values)



**Figure 3:** Confirmatory Factor Analysis Model for the General Self-Efficacy Scale (High School - Standardized Values)

**Table 1: The Results of the Confirmatory Factor Analyses of the Scales Examined for Psychometric Properties**

Fit Indices	Good Fit*	Adequate Fit*	GSE (Secondary)	GSE (High)	Attitude toward School (Secondary)
RMSEA	0<RMSEA<0.05	0.05<RMSEA<0.08	.074	.08	.068
SRMR	0<SRMR<0.05	0.05<SRMR<0.1	.044	.045	.06
NNFI	0.97<NNFI<1	0.95<NNFI<0.97	.91	.92	.91
CFI	0.97<CFI<1	0.95<CFI<0.97	.94	.94	.92
			100**	138**	422**
sd			34	33	167

\* (Jöreskog & Sörbom, 2015; Şimşek, 2007) \*\* p<.01

**Table 2: Alpha Coefficients of Reliability**

		Secondary	High	University
Attitude	School as a Barrier to Personal Development	.89	.88	.89
	School as a Supportive to Personal Development	.86	.89	.89
	School as an Entity to be Longed for	.81	.77	.77
General Self-efficacy	Effort and Resistance	.83	.83	.84
	Ability and Confidence	.72	.75	.72

### Data Analysis

T-test, ANOVA and regression analyses were performed to answer the research questions. SPSS Hayes process v.3.5 was used to analyze the moderator effect. The measurement models were tested using SPSS AMOS 23, and the inter-variable relationships using SPSS 23 package programs. Missing data analysis was conducted with the listwise method, and the missing data were

replaced by the series mean (Kalaycı, 2008). Normal distribution, which is among the main assumptions of the analyses used, was evaluated with skewness and kurtosis values, and the assumption of normal distribution was met as the values ranged between -1,5 and +1,5 (Leech et al., 2014). The assumption of the linear relationship between variables was met when the Q-Q graphs were checked.

## **Results**

This section includes descriptive statistics in the first place and presents the findings obtained from the analyses conducted in light of the research questions. The study was participated by a total of 1282 students from three different secondary schools, four different high schools, and eight different departments of two universities. 723 of these students are females, 542 are males, and one student marked “other” while 33 students left this question unanswered. Participants’ distribution by grades is shown in Table 3.

<b>Grade</b>	<b>f</b>	<b>%</b>
6	175	14
8	185	14
9	248	19
11	246	19
Undergraduate year 1	189	15
Undergraduate year 4	239	19
Total	1282	100

Descriptive statistics concerning the dependent variables are presented in Table 4

Table 4: Descriptive Statistics concerning the Dependent Variables

Level		n	Min	Maks	Mean	S. S.	Skewnes	Kurtosis
Secondary	Attitude towards School	360	1	5	2,26	1,00	0,61	-0,47
	School as a Barrier to Personal Development	360	1	5	3,97	0,82	-0,89	0,59
	School as a Supportive to Personal Development	360	1	5	2,87	1,13	0,19	-0,78
	School as an Entity to be Longed for	360	33	84	60,99	7,70	-0,41	1,28
Secondary	Attitude Total	360	1	4	3,21	0,58	-0,82	1,03
	Effort and Resistance	360	1	4	3,34	0,58	-0,94	0,59
	Ability and Confidence	360	1	4	3,34	0,58	-0,94	0,59
	General Self-efficacy Total	360	10	40	32,54	5,41	-0,76	0,75
High	Attitude towards School	494	1	5	2,91	1,03	0,26	-0,74
	School as a Barrier to Personal Development	494	1	5	3,32	0,93	-0,57	-0,17
	School as a Supportive to Personal Development	494	1	5	3,32	0,93	-0,57	-0,17
	School as an Entity to be Longed for	494	1	5	1,96	0,87	0,84	0,28
High	Attitude Total	494	41	84	57,56	7,09	0,52	0,93
	Effort and Resistance	494	1	4	3,02	0,59	-0,41	0,58
	Ability and Confidence	494	1	4	3,23	0,59	-1,06	2,04
	General Self-efficacy Total	494	10	40	30,95	5,52	-0,59	1,18
University	Attitude towards School	428	1	5	2,28	0,82	0,89	0,87
	School as a Barrier to Personal Development	428	1	5	3,79	0,68	-0,79	1,45
	School as a Supportive to Personal Development	428	1	5	2,32	0,79	0,27	-0,05
	School as an Entity to be Longed for	428	1	5	2,32	0,79	0,27	-0,05
University	Attitude Total	428	42	79	57,68	5,38	0,21	0,90
	Effort and Resistance	428	1,67	4	3,03	0,44	0,13	0,33
	Ability and Confidence	428	2	4	3,20	0,40	0,11	0,39
	General Self-efficacy Total	428	20	40	30,91	3,96	0,25	0,41



Table 3 shows that school attitude scores and general self-efficacy levels of secondary school students are higher than those of high school and university students. Independent samples t-test was applied to see whether the students' school attitude and general self-efficacy scores varied by gender, and the results obtained are presented in Table 5.

**Table 5. T-test results concerning the Scores of "School as a Barrier to Personal Development"**

Level	Variable	Gender	n	Mean.	S	Sd	t	p
Secondary	Attitude	Female	154	59,79	8,61	352	-2,56	,01
		Male	200	61,89	6,86			
	General Self-efficacy	Female	154	32,16	5,28	352	-1,12	,26
		Male	200	32,81	5,50			
High	Attitude	Female	263	58,20	7,44	478	1,95	,05
		Male	217	56,94	6,64			
	General Self-efficacy	Female	263	31,04	5,60	478	,19	,84
		Male	217	30,94	5,22			
University	Attitude	Female	117	58,80	5,93	415	2,77	,01
		Male	300	57,21	5,03			
	General Self-efficacy	Female	117	30,99	4,21	415	,77	,77
		Male	300	30,87	3,74			

Table 5 shows that the students' attitudes towards school vary by gender at secondary school and university levels. While males' attitudes toward school (=61.89) are higher than those of females (=59.79) at the secondary school level ( $t(352)=2.56$ ,  $p<.05$ ). On the other hand, female students' mean scores (=58.80) are higher than those of male students [(=57.21)  $t(415)=2.77$ ,  $p<.01$ ], at the university level. Cohen d effect sizes were found as .27 for the differences among secondary school students and as .29 for the differences among university students. On the other hand, general self-efficacy does not vary by gender at secondary, high,

and university levels. Variance analysis was conducted to see whether attitudes from school and general self-efficacy varied by level of education, and the values obtained are given in Table 6.

**Table 6. Distribution of School Attitude and General Self-efficacy Scores by Level of Education**

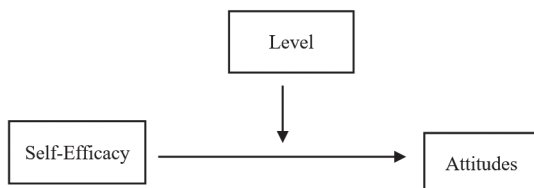
	Level	n	Mean.	S	sd	F	p	Source of Difference
Attitudes towards School	Secondary	360	60,99	7,70	1279	32,22	.00	Secondary-High Secondary-University
	High	494	57,56	7,09				
	University	428	57,68	5,38				
General Self-efficacy	Secondary	360	32,54	5,41	1279	13,33	.00	Secondary-High Secondary-University
	High	494	30,95	5,52				
	University	428	30,91	3,96				

Table 6 shows that attitude scores towards the school and general self-efficacy scores vary by level of education. Secondary school students' total scores are higher for both variables. Examining the source of the difference with LSD test, it is seen that secondary school students differ from high school and university students in both attitudes towards school and general self-efficacy scores. Cohen d effect sizes concerning these differences in attitudes towards school are .46 for the difference between secondary and high school students and .50 for the difference between secondary school and university students. These effect sizes were found as .29 for secondary and high school students and .34 for secondary school and university students for the differences in general self-efficacy scores.

Regression analysis was performed to check if general self-efficacy is a significant predictor of attitudes towards school. General self-efficacy appears to be a significant predictor of attitudes towards school at all three levels [R=.17, R<sup>2</sup>=.03, F=39.78, p<.01]. However, 0.3% of the total variance of attitudes towards

school is explained by general self-efficacy. General self-efficacy is a significant predictor of attitudes towards school at the secondary school level [ $R=.22$ ,  $R^2=.049$ ,  $F=18.59$ ,  $p<.01$ ], and general self-efficacy explains 0.5% of the total variance of attitudes towards school. Similarly, general self-efficacy is a significant predictor of attitudes towards school at the high school level [ $R=.12$ ,  $R^2=.014$ ,  $F=7.18$ ,  $p<.01$ ] explaining 0,14% of the total variance of attitudes towards school. On the other hand, general self-efficacy is not a significant predictor of attitudes towards school at the university level.

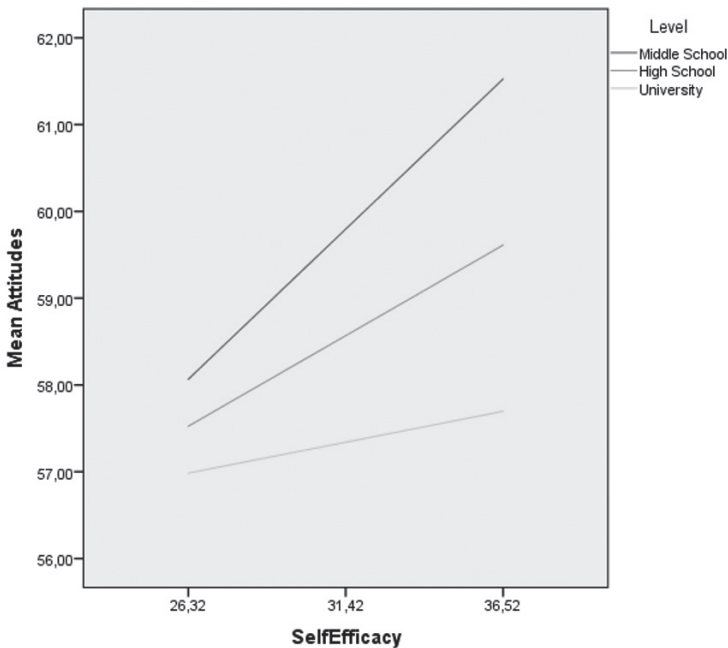
In order to determine if the difference between levels is significant in predicting attitudes towards school by general self-efficacy, the moderating effect of the level was examined. The model concerning this analysis is presented in Figure 4.



**Figure 4:** Moderating effect of level of education on the relationship between general self-efficacy and attitudes towards school.

The moderating effect of the level was analyzed to determine whether the relationship between general self-efficacy and attitudes towards school varied by level of education. The analysis was performed using Hayes Process for SPSS. The effect of general self-efficacy on attitudes towards school was positive and significant ( $b=-.56$ ,  $s.e.=.12$ ,  $p<.001$ ), conditional on level = 0; the conditional effect of level was positive and significant ( $b=3.84$ ,  $se=1.88$ ,  $p<.05$ ), conditional on general self-efficacy = 0. The interaction term was statistically significant ( $b=2.6055$ ,

s.e.=1.0509,  $p=.0136$ ) in the model, indicating that level was a significant moderator of the effect of general self-efficacy on attitudes towards school. The R-square change from Model 1 (effect of general self-efficacy on attitudes towards school) to Model 2 (adding in the interaction of general self-efficacy and level to model 1) was .0062, indicating the interaction effect accounted for only 0.62% added variation in Y. The moderation effect of level on the relationships between general self-efficacy and attitudes toward school was presented in Figure 5.



**Figure 5:** The moderation effect of level on the relationships between general self-efficacy and attitudes towards school

These are the simple slopes for the relationship between general self-efficacy (X) and attitudes towards school (Y) at different levels of the moderator (W=school level). Graph 1

shows that the relationship between general self-efficacy and attitudes toward school is higher at the secondary school level, while regression coefficients of this relationship and the slopes of the graph decrease as the level of education gets higher.

## **DISCUSSION**

The present study examined whether general self-efficacy levels and attitudes towards secondary school, high school, and university students varied by level of education and gender as well as the moderating effect of education on the relationship between attitudes towards school and general self-efficacy. The results show that males' attitudes towards school are higher while general self-efficacy does not vary by gender. Attitudes towards school are higher in secondary school students and decrease in high school and university students. General self-efficacy is a significant predictor of attitudes towards school, and level is a significant moderator of the relationship between general self-efficacy and attitudes towards school. The relationship between general self-efficacy and attitudes towards school is higher among secondary school students than high school and university students. Regression coefficients between the two variables decrease as the education level increases.

At the secondary school level, males' attitudes towards school are higher at a statistically significant rate. Similarly, Cheng & Chan (2003) found that males' attitudes towards school were higher than those of females in the group where secondary and high school students were studied together. However, Marks (1998) states that females hold higher attitudes toward school among 14-15-year old students in Australia. The present study found that the scores of males at the high school level were higher, while the difference was not significant. Parallel with this finding, Başaran & Yıldırım (2017) report that high school

students' attitudes towards school do not vary by gender. Adıgüzel & Karadaş (2013), on the other hand, state that females' attitudes towards school are higher among 10<sup>th</sup> graders. In the present study, females at the university level are seen to have significantly higher scores of attitudes towards school. Effects sizes of significant differences were found as .27 for secondary school students and .29 for university students. According to Cohen, Manion, and Morrison (2007) these are modest effects.

On the other hand, general self-efficacy does not vary by gender at all three levels. Uysal (2013) states that general self-efficacy does not vary by gender in parallel with these findings. However, many researchers claim that general self-efficacy varies by gender, and males have higher general self-efficacy scores (Aypay, 2010; Bonsaksen et al., 2019; Wang et al., 2019).

When attitude towards school is examined according to the level of education, it is at the highest level at secondary school but decreases at high school and remains at the high school level in undergraduate education. Cohen *d* effect sizes were found as .46 for the secondary-high school difference and .50 for the secondary-university difference. These are moderate-level effect sizes (Cohen et al., 2007). These differences in attitudes towards school by the level of education are parallel with many findings in the literature (Argon & Yılmaz, 2016; Cheng & Chan, 2003; Özdemir, 2017; Stern, 2012) Cheng and Chan (2003) report that secondary school students' attitudes towards school are more positive. Similarly, Özdemir (2017) states that high school students' attitudes towards school are low. Argon and Yılmaz (2016) also found that high school students' attitudes towards school were low and that students' peer relationships were negatively affected by lowered attitudes towards school. Negative attitudes towards school may be expected to negatively affect many conditions, such as academic achievement, absence rates,

and disobeying school rules (Jenkins, 1997; Marjoribanks, 1992).

The fact that high school students hold lower attitudes towards school compared with secondary school students can be associated with several reasons. Compared with secondary school students, high school students are reported to find school-related tasks more meaningless, show less persistence in academic tasks, are less willing to obey school rules, and think that hard work is only little related to their future (Entwisle et al., 2005; Stern, 2012; Wigfield et al., 1997) These negative opinions about school may cause attitudes towards school to fall as well.

Regarding general self-efficacy, secondary school students' scores are higher than those of high school and university students. Cohen *d* effect sizes were found as .29 for the differences between secondary and high school students and .34 for the difference between secondary school and university students. The effect sizes found for the differences in general self-efficacy are at a modest level (Cohen et al., 2007). Similarly, Chen et al. (2019) state that third-year students at universities have lower self-efficacy perceptions than second-year students. Aktamiş et al. (2016), on the other hand, report that secondary school students' self-efficacy perceptions increase as their grades get higher. However, Bonsaksen et al. (2019) found that general self-efficacy did not vary by age.

General self-efficacy is a significant predictor of attitudes towards school. However, the total variance explained is considerably low (0.5%). Similarly, many studies report relationships between individuals' self-efficacy perceptions and attitudes (Baltacı, 2004; Emre & Ünsal, 2017; Özokcu, 2018; Sani & Zain, 2011; Serpil Yorganci, 2017). In some of the studies state that self-efficacy predicts attitude, almost 50% or more of the variance is explained (Baltacı, 2004; Tuncer & Akmençe, 2019) in some others, 10% of the variance is explained (Emre & Ünsal,

2017) while some studies explain less than 1% of the variance (Özokcu, 2018).

### **Recommendations**

In light of the findings obtained, attitudes towards school fall together with the start of high school education. In this regard, it would be beneficial to take measures to increase attitudes towards school in the curriculum for high school. Performance-based evaluation has a negative impact on attitudes towards school, while a leaning-oriented evaluation approach promotes the attitudes (İlhan, 2017). In addition to the pressure caused by the university entrance exam, usually, performance-based evaluations are conducted at high schools. Adopting evaluation approaches that focus on student learning and aim to fill the gaps in learning instead of performance and competition-based evaluation in curricula is highly important to promote students' attitudes towards school. In addition, high school students generally find school meaningless and think that academic studies are hardly related to their future may cause attitudes towards school to decrease at the high school level (Stern, 2012). Thus, curricula should be revised in line with the principles of suitability for the social environment, student appropriateness, active learning, and learning-based evaluation (Açıkgöz, 2003; Ertürk, 1991; İlhan, 2017).

Teacher expectations and behaviors also greatly impact students' attitudes towards school. For example, teachers' friendly approaches, positive student-teacher interactions, and students' being supported by their teachers and peers improve attitudes towards school (Gottfredson et al., 2010; Rosenthal & Jacobson, 1968). In this respect, implementing professional development programs for teachers can be useful.

Attitude towards school is directly related to many variables concerning school and teachers. Students' participation in



extracurricular activities like art and sport promotes an increase in their attitudes towards school (Jenkins, 1997; Uyan, 2013). Therefore, students must be encouraged to participate in such activities; the variety of activities offered to students should be enlarged, especially at the high school and university levels, where attitudes towards school appear to be low. Moreover, finding school rules fair and reasonable affects attitudes towards school (Jenkins, 1997). Creating a democratic environment in schools and promoting the inclusion of students in decision-making processes is important in improving attitudes towards school. Similarly, Akkan (2011) suggests that students' democratic awareness is significantly related to academic achievement.

Despite the findings and recommendations offered for practice, the present study has some limitations. The study was carried out with 1284 students within the borders of İzmir Metropolitan Municipality. The study can be repeated with samples that could represent the whole country throughout Turkey. Variables related to students' attitudes towards school were limited to general self-efficacy, gender, and level of education. Researchers can be recommended to conduct new studies, including other variables influencing attitudes towards school. The difference between the levels of education was examined with a cross-sectional approach; thus, the findings can be evaluated with longitudinal studies. In addition, it would be fruitful to conduct experimental studies to see how curricular amendments affect attitudes towards school.

In conclusion, the present study examined general self-efficacy and attitudes towards school from secondary school to university; it was found that both general self-efficacy and attitudes towards school are higher at the secondary school level while lower at the high school and university levels. General self-efficacy is significantly related to attitudes towards school, and level of education has a moderating role in this relationship. Therefore,

it would be useful to consider the findings concerning attitudes towards schools when making amendments to the curriculum.

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