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School Engagement and Learning Responsibility in Middle School Students¹

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Abstract

This study aims to examine the relationship between middle school students' levels of school engagement and their learning responsibilities. The correlational study was conducted, which is one of the quantitative research models. The study sample consisted of 353 middle school students in İstanbul, Üsküdar selected through simple random sampling, one of the probability sampling methods. The data collection tools used in the study were a personal information form, School Engagement Scale, and Learning Responsibility Scale. Independent samples t-test, ANOVA, correlation, and multiple linear regression techniques were used in the analysis of the collected data. In the study, it was found that both school engagement and learning responsibility levels of female students were significantly higher. When examining students' learning responsibility, it was found that seventhgrade students and students attending public schools had significantly higher levels of learning responsibility than other students. When examining the predictive power of school engagement on learning responsibility, it was found that school engagement predicted learning responsibility by 62%. Based on these results, it is thought that providing an educational environment in which children feel engaged will also increase their learning responsibilities.

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Introduction

Education is a process that plays a significant role in an individual's life. This process extends from childhood to adulthood, encompassing a major part of one's life. In this context, schools are particularly important institutions where individuals develop social skills, interact with society, and have learning experiences (Boud, 1988; Lee & Smith, 2001; Lodge, 2007; Shavelson & Huang, 2003). These experiences significantly affect an individual's level of school engagement. However, an individual's level of school engagement is shaped not only by acquiring knowledge and skills but also by emotional, cognitive, and behavioral factors. Students' level of school engagement is closely related to active participation in the learning process, a sense of belonging, and positive social relationships (Finn & Voelkl, 1993). Schlecty (2001) underscores the critical importance of the extent to which students internalize their duties and responsibilities in his examination of the concept of school engagement. Similarly, Fredricks et al. (2004), in their models for determining school engagement, highlight the awareness of responsibility and explain the student's fulfillment of duties and responsibilities and participation in class under the heading of behavioral engagement.

Engagement is described as a deep interest in, active participation in, and dedication to the learning process (Cook-Sather & Luz, 2015). Engagement is often conceptualized as a multidimensional construct comprising behavioral, emotional, and cognitive dimensions (Fredricks et al., 2004), and these dimensions are crucial in developing students' learning responsibilities in the classroom (Hospel & Galand, 2016; Pöysä et al., 2018; Steenberghs et al., 2021). Behavioral engagement is the students' engagement in classroom activities; emotional engagement, on the other hand, reflects students' affect, that is, their feelings of inclusion and their emotional associations in the classroom. Cognitive engagement is the students' willingness and effort that they put in the learning process. (DeMonbrun et al., 2017; Rimm-Kaufman et al., 2015). Behavioral engagement reflects active participation in school activities, such as class discussions, debates, attendance, and attentiveness in class (Ackert, 2018). Emotional engagement encompasses students' feelings toward school, including their sense of belonging and positive attitudes toward learning (Luo et al., 2019). Cognitive engagement involves deeper intellectual involvement, such as critical thinking and problem-solving (Upadyaya & Salmela-Aro, 2013). Studies have shown that well-organized classrooms with clear expectations, teachers' use of effective time management strategies, and routines in the classroom can foster behavioral, cognitive, and emotional engagement (Hospel & Galand, 2016). Furthermore, teachers' reinforcement of desirable behaviors is positively related to students' situation-specific behavioral and cognitive engagement during lessons (Pöysä et al., 2018). When a student develops thoughts about going to school merely out of obligation, they tend to disengage from school cognitively, emotionally, and behaviorally. However, for a student who feels that their presence at school is essential and that they themselves are valuable, willingness and engagement come to the forefront in this process. Such students not only fulfill their duties and responsibilities to avoid punishment but also recognize that the educational process serves their individual goals. Consequently, they internalize their aims and objectives and do not neglect their duties and responsibilities (Er, 2021; Jimerson et al., 2003; Finn & Voelkl, 1993; Karababa, et al., 2018).

Similarly, learning responsibility refers to students' ability to take ownership of their learning processes, including setting personal goals, monitoring their progress, and independently

managing tasks (Gökdağ-Baltaoğlu & Güven, 2022). Learning responsibility is a concept that involves both the student's competence and capability. The student performs the necessary actions, manages the learning process, and improves in areas where they recognize deficiencies, thereby increases their academic success (Erişti, 2017; Hill, 2002; Kolan, 2020; Roper, 2007). For a student who feels a sense of responsibility, school engagement can be seen as a phenomenon that develops in tandem. With a sense of responsibility, the student's relationship with the school is not limited to the time spent there, but the learning process is also reinforced at home. Additionally, these students, who not only prepare for learning but also actively participate in extracurricular activities, underscore the importance of fulfilling responsibilities, indicating a relationship between responsibility and engagement (Brooks & Brooks, 2006; Özen, 2013).

As mentioned, learning responsibility is students' taking on their responsibilities, managing their learning processes, evaluating the effects of their learning, and taking steps to address any deficiencies (Hill, 2002; McCombs, 2001; Roper, 2007). This concept involves students being aware of their expectations, setting goals and objectives (Sierra, 2009), showing willingness in the learning process (Clayton, 2003), collaborating effectively (Felder & Brent, 2009), and having positive attitudes and thoughts towards learning, which motivate them to put in effort (Savin-Baden & Major, 2004). Students who possess learning responsibility are inclined to complete their tasks on time (Discenza et al., 2002), care about the tasks or assignments given to them (Warren, 1996), and strive to achieve the best possible outcomes (Kitsantas & Zimmerman, 2009; Zimmerman & Kitsantas, 2005). By acquiring learning responsibility, students can transform it into a skill, enhancing their academic and daily success. Considering learning responsibility as a tool serving a purpose and acknowledging that education is not confined to a school or a physical building, it can be said that students establishing their own learning systems is a key to lifelong success. Indeed, the literature contains various studies demonstrating that learning responsibility is a significant predictor of academic success (Allan, 2006; Bacon, 1993; Başbay, 2008; Carpenter & Pease, 2013; Cook & Luz, 2015; Çam & Ünal-Oruç, 2014; Devlin, 2002; Kaya & Doğan, 2014; Özen, 2013; Yakar, 2017; Yeşil, 2013).

School engagement and learning responsibility are clearly affected by a range of developmental, social, and motivating factors, among which gender, grade level, and school type are particularly significant (Boubih et al., 2023). As children move through the grades, shifts in their cognitive ability, social maturity and academic expectations affect the extent to which they are engaged in and take responsibility for their learning (Amerstorfer & Münster-Kistner, 2021). In Turkey, eighth-grade students face high-stakes testing through the 'Transition to High School Exam (LGS)', which is used to determine their eligibility for entry into high schools, particularly those with competitive academic programs. The exam evaluates students' performance in subjects like Turkish, mathematics, science, and social studies, and it plays a significant role in shaping their future educational path. The desire to perform well on this exam often leads to intense study habits and a strong sense of responsibility for academic success (Güngör, 2021). Gender differences are also noticeable, with girls demonstrating stronger behavioral and emotional engagement, whilst boys frequently respond better to competitive or hands-on activities (Kivikangas et al., 2014). In developing countries, public school students, often from lower socioeconomic backgrounds, are motivated by the goal of securing a profession through education (Çevik, 2005). In contrast, private school students, with more financial resources, benefit from additional opportunities both inside and outside of school. As a result, school holds more significance for public school students (Kandemir, 2015).

Recognizing these characteristics enables educators to create solutions that address the varying needs of children across grades, genders, and school types. There are numerous studies on the factors affecting students' levels of school engagement and the impacts of these factors on overall quality of life, achievement, and social adaptation. In terms of gender, it is generally noted that female students have higher levels of school engagement, although the relationship between learning responsibility and gender has not been explicitly addressed. Similarly, changes in students' levels of school engagement and learning responsibility across different grade levels have not been sufficiently explored. Therefore, further research is needed to comprehensively examine these factors and their effects on students' school engagement and learning responsibility (Arastaman, 2009; Aydın, 2018; Jenkins, 1997; Kahraman, 2014; Kalaycı & Özdemir, 2013; Lau et al., 2018; Savi, 2011). Existing research on school engagement often addresses general factors, but more specific studies examining the relationships between students and their families, teachers, peers, and the overall school environment are needed. Thus, an in-depth analysis of student-school interaction and understanding how this interaction affects students' levels of engagement is crucial (Kolan, 2020). Enhancing school engagement will positively influence students' overall quality of life, academic achievement, and social adaptation (Dönmez, 2016).

Although the concepts of school engagement and learning responsibility are widely discussed and examined in various contexts, such as classroom setting and school environment, there is no study exploring the relationship between these two constructs. Investigating this interaction is particularly significant in middle school students due to their critical developmental stage, where they experience significant cognitive, emotional, and social changes. This period is crucial for establishing educational attitudes and behaviors that can impact future academic success. By focusing on middle school students, this study aims to fill a research gap and offer valuable insights that could inform strategies to boost both engagement and responsibility, ultimately enhancing academic performance. This study is expected to make a notable contribution to the existing literature and provide actionable recommendations for educators and policymakers to foster student success.

In this vein, the purpose of this study is to examine the relationship between middle school students' levels of school engagement and their learning responsibilities. The research questions have been formulated as follows.

- 1. What is the level of school engagement among middle school students? Does students' school engagement vary according to:
 - Gender,
 - · Grade level,
 - School type?

- 2. What is the level of learning responsibility among middle school students? Does students' learning responsibility vary according to:
 - Gender,
 - Grade level,
 - School type?
- 3. Does the school engagement of middle school students predict their learning responsibility?

Method

Research Design

In this correlational study, a quantitative research method, was employed to examine the relationship between middle school students' school engagement and learning responsibilities. Correlational studies aim to describe occurrences or ongoing phenomena (Büyüköztürk et al., 2010). In this model, the simultaneous consideration of two or more variables allows for the observation of whether any change occurs and, if so, the direction and extent of this change (Karasar, 2012).

Sample

The sample of this study consisted of 353 middle school students enrolled in private and public schools in the Üsküdar district of Istanbul during the 2022-2023 academic year. Üsküdar was chosen as the study site because of its diverse demographic structure, which comprises pupils from various socioeconomic and cultural backgrounds, allowing for a more representative analysis of middle school populations. To ensure a balanced representation, students were selected from both public and private schools, which were chosen based on their accessibility and willingness to participate in the study. The schools included were determined to capture sufficient variability within the district. The simple random selection approach, a probability sampling methodology, was used to ensure that every student in the chosen schools had an equal chance of admission. The inclusion procedure began with the collection of lists of all enrolled pupils from participating institutions, which were then utilized to generate a randomized selection. Detailed information about the study sample is presented in Table 1.

Table 1Demographic Information Regarding the Sample of the Study

Variables		N	%
Gender	Female	186	52.7
	Male	167	47.3
Grade Level	Fifth Grade	118	33.4
	Sixth Grade	85	24.1
	Seventh Grade	62	17.6
	Eighth Grade	88	24.9
School Type	Private	212	60.1
	Public	141	39.9

The study included a total of 353 students, with 186 females (52.7%) and 167 males (47.3%). The study sample consisted of 353 participants, with slightly more females (52.7%) than males (47.3%). The students were distributed across grade levels, with the highest representation in fifth grade (33.4%) and the lowest in seventh grade (17.6%). A majority of the students attended private schools (60.1%), while 39.9% were from public schools.

Ethical committee approvals, ministry permissions, and parental consents were obtained for the students' participation in the study, and the principle of voluntariness was adhered to.

Data Collection Tools

The data for the study were collected using a Personal Information Form, School Engagement Scale, and Learning Responsibility Scale.

Personal Information Form

Through the Personal Information Form prepared by the researchers, the aim was to gather demographic information about the students. The form included questions regarding demographic characteristics such as gender, grade level, and school type.

School Engagement Scale

The School Engagement Scale utilized in this study to determine the level of school engagement among middle school students was developed by Fredricks et al. (2005). The adaptation into Turkish, as well as the validity and reliability study of the scale, were conducted by Çengel et al. (2017). The School Engagement Scale is a five-point Likert scale consisting of 19 items and three dimensions: behavioral engagement, emotional engagement, and cognitive engagement. Behavioral engagement was measured with five items, with scores ranging from 5 to 25 (low: 5-11, moderate: 12-18, high: 19-25). Emotional engagement was assessed through six items, with possible scores between 6 and 36 (low: 6–15, moderate: 16–25, high: 26–36). Cognitive engagement was evaluated with eight items, resulting in scores ranging from 8 to 40 (low: 8–18, moderate: 19–29, high: 30–40). As scores obtained from the scale increased, students' level of school engagement also increased. The lowest score that could be obtained from the overall scale was 19, while the highest score was 101. The results of the confirmatory factor analysis aimed at supporting the theoretical background of the scale endorsed the threefactor structure. The explained total variance of the scale was 49.39%. When examining the reliability coefficients of the scale, the total Cronbach's Alpha value of the scale was .89, .68 for the behavioral engagement sub-dimension, .80 for the emotional engagement sub-dimension, and .80 for the cognitive engagement sub-dimension. As a result of reliability calculations conducted within the scope of the current study, Cronbach's Alpha coefficients were calculated as .87 for the total scale, .62 for the behavioural engagement dimension, .79 for the emotional engagement dimension, and .82 for the cognitive engagement dimension. All this information indicated that the scale was valid and reliable.

Learning Responsibility Scale

The Learning Responsibility Scale used in this study to determine the level of learning responsibility among middle school students was a scale developed by Yeşil (2013). The scale

consisted of 22 items and two dimensions: learning responsibilities during the course and learning responsibilities outside the course, rated on a five-point Likert scale. Learning responsibilities during the course were assessed through 13 items, with possible scores between 5 and 65 (low: 5-24, moderate: 25-44, high: 45-65). Learning responsibilities outside the course were assessed through 11 items, with possible scores between 5 and 55 (low: 5–21, moderate: 22-38, high: 39-55). As scores obtained from the scale increase, students' level of learning responsibility also increased. The lowest score that could be obtained from the scale was 22, while the highest score was 110. The factor loadings of the items in the scale ranged from .55 to .72. The explained total variance of the scale was 41.36%. When examining the reliability coefficients of the scale, the total Cronbach's Alpha value of the scale was calculated as .89, with Cronbach's Alpha values for the learning responsibilities during class processes and learning responsibilities outside of class calculated as .55 and .72, respectively. As a result of reliability calculations conducted within the scope of the current study, Cronbach's Alpha coefficients were found to be .93 for the total scale, .89 for learning responsibilities during class processes, and .90 for learning responsibilities outside of class. All this data suggested that the scale was both valid and reliable.

Data Analysis

The data collected in the study were analyzed using SPSS 25.00 software. Inclusion criteria for the dataset involved excluding incomplete or unanswered questionnaires. Descriptive statistics were used for analyzing demographic variables, independent samples t-tests for comparing two groups, ANOVA for comparing more than two groups, correlation analysis to examine the relationship between school engagement and learning responsibility, and multiple linear regression analysis to determine the predictive power of school engagement on learning responsibility. Before conducting the analyses with the first research question, a normality analysis was performed to determine whether the data exhibited a normal distribution. The criterion of minimal difference between mean and median values was examined during the analysis. Additionally, skewness and kurtosis values were expected to fall within the range of ±2.00 times the standard error (George & Mallery, 2010). After the examinations, it was seen that the scale satisfied both relevant criteria and the assumption of normal distribution was met. With this result, parametric tests were decided to be used. A margin of error of 5% was set for all analyses. Within the scope of the second research question, the learning responsibilities of middle school students were examined concerning the variables of gender, grade level, and school type. Before starting with the analyses, a normality analysis was conducted to ascertain whether the data exhibited a normal distribution. During the analyses, the criterion of minimal difference between mean and median values was considered. Additionally, it was expected that the skewness and kurtosis values would fall within the range of ±2.00 times the standard error value (George and Mallery, 2010). As a result of the analysis, it was observed that the scale met the relevant criteria, and it was concluded that the assumption of normal distribution was met. With this result, the decision was made to employ parametric tests. A significance level of 5% was set for all analyses.

The study received approval from the Institutional Review Board (IRB) at Bahçeşehir University (Approval Date:14.12.2022, Approval Number: E-20221704-604.02.02-48408) prior to its initiation.

Results

Findings Regarding the Level of School Engagement Among Middle School Students

The level of school engagement among middle school students was examined in terms of variables such as gender, grade level, and school type within the scope of the first research question. The analyses began with the examination of descriptive statistics. Table 2 presents descriptive statistics regarding the scores obtained from the School Engagement Scale.

Table 2Descriptive Statistics Regarding Students' Levels of School Engagement

Scale	Variables	Min. Value	Max. Value	Χ	sd
School Engagement	Behavioral Engagement	5	18	14.65	2.79
	Emotional Engagement	6	23	15.79	4.49
	Cognitive Engagement	8	32	20.80	5.83
	Total	19	72	51.24	10.84

The table presents descriptive statistics on students' levels of school engagement across three dimensions: behavioral, emotional, and cognitive engagement. The mean score for behavioral engagement is 14.65, suggesting that students generally displayed a moderate level of participation in school activities. For emotional engagement, the mean score is 15.79, indicating that students felt a moderate emotional connection to their school environment. Cognitive engagement shows a higher mean score of 20.80, reflecting a strong intellectual investment in their learning processes. The overall total engagement mean score is 51.24, suggesting that students were moderately engaged in school across all dimensions. These scores show that students were engaged at a moderate level, with cognitive engagement being the strongest.

Results Regarding the Level of School Engagement among Middle School Students Based on Gender

The collected data were analyzed using independent samples t-test to determine whether there were differences in students' levels of school engagement based on gender. The data related to the analysis are presented in Table 3.

Table 3Independent Samples t-Test Results on School Engagement of Middle School Students by Gender

Scale/Subscale	Gender	N	\bar{x}	sd	t	df	р
Behavioral Engagement	Female	186	15.25	2.61	4.31	351	0.00*
	Male	167	13.99	2.84			
Emotional Engagement	Female	186	16.57	4.44	3.50	351	0.00*
	Male	167	14.92	4.41			
Cognitive Engagement	Female	186	21.71	5.70	3.13	351	0.00*
	Male	167	19.78	5.82			
School Engagement Total	Female	186	53.53	10.54	4.28	351	0.00*
	Male	167	48.69	10.62			

^{*}p<0.05

The analysis revealed that the mean scores of female students in behavioral engagement were higher than the scores of male students. This difference was statistically significant [t(351)=4.31; p<0.05]. When the emotional engagement dimension was examined, it was found that the mean scores of female students in emotional engagement were higher than the scores of male students. This difference was statistically significant, as well [t(351)=3.50; p<0.05]. Likewise, in the cognitive engagement dimension, the analysis demonstrated that the mean scores of female students in cognitive engagement were higher than the mean scores of male students. This difference proved to be statistically significant [t(351)=3.13; p<0.05]. Lastly, the analysis showed that the school engagement total mean scores of female students were higher than the mean scores of male students. This difference in mean scores was statistically significant [t(351)=4.28; p<0.05].

Results Regarding the Level of School Engagement among Middle School Students Based on Grade Level

The obtained data were analyzed using ANOVA to determine whether there were differences in students' levels of school engagement based on grade level. The results of the analysis are presented in Table 4.

 Table 4

 ANOVA Results on School Engagement of Middle School Students by Grade Level

Scale/Subscale	Grade Level	N	X	sd	F	df	р	Significant Difference
Behavioral	5th Grade	118	15.14	2.73				
Engagement	6th Grade	85	14.64	3.20	2.427	3-349	0.06	-
	7th Grade	62	14.53	2.57				
	8th Grade	88	14.10	2.49				
Emotional	5th Grade	118	15.75	4.49				
Engagement	6th Grade	85	14.79	4.82	2.488	3-349	0.06	-
	7th Grade	62	16.71	4.26				
	8th Grade	88	16.15	4.21				
Cognitive Engagement	5th Grade	118	20.24	5.39	5.845	3-349	0.00*	8th Grade>5th Grade
	6th Grade	85	19.12	5.49				8th Grade>6th Grade
	7th Grade	62	22.00	6.28				
	8th Grade	88	22.33	5.93				
School Engagement	5th Grade	118	51.14	10.46	2.960	3-349	0.03*	
Total	6th Grade	85	48.54	11.36				
	7th Grade	62	53.24	11.36				
	8th Grade	88	52.58	10.07				

*p<0.05

As demonstrated in Table 4, there was no statistically significant difference in behavioral engagement scores across grade-level categories [F(3.349)=2.42; p>0.05]. Similarly, there was no statistically significant difference found among the scores of emotional engagement [F(3.349)=2.48; p>0.05]. However, a statistically significant difference was found among the

scores of cognitive engagement [F(3.349) = 5.84; p < 0.05]. Lastly, there was a statistically significant difference found among the of school engagement total scores across grade level categories [F(3.349) = 2.96; p < 0.05]. Tukey-B post-hoc tests were conducted to determine from which categories the differences in cognitive engagement and total school engagement scores originated. According to the analysis results, the scores of cognitive engagement for eighthgrade students was higher than the scores of fifth and sixth-grade students. Therefore, the cognitive engagement of eighth-grade students significantly differed from that of other grade-level students. In addition, the total school engagement scores of seventh-grade students were higher than the score of sixth-grade students. Therefore, the level of school engagement of seventh-grade students significantly differed from that of other grade-level students.

Results Regarding the Level of School Engagement among Middle School Students Based on School Type

The data obtained to investigate whether there were differences in students' level of school engagement based on school type were analyzed using independent samples *t*-test. The data related to the analysis are presented in Table 5.

Table 5Independent Samples t-Test Results on School Engagement of Middle School Students by School Type

Scale/Subscale	School Type	N	\bar{X}	sd	t	df	Р
Behavioral Engagement	Private	212	14.76	2.95	0.90	351	0.36
	Public	141	14.49	2.53			
Emotional Engagement	Private	212	15.35	4.59	-2.25	351	0.02*
	Public	141	16.45	4.27			
Cognitive Engagement	Private	212	19.91	5.69	-3.58	351	0.00*
	Public	141	22.14	5.79			
School Engagement Total	Private	212	50.02	10.95	-2.61	351	0.00*
	Public	141	53.08	10.44			

*p<0.05

As seen in Table 5, there was no statistically significant difference in the scores of behavioral engagement between private and public school students [t(351)=0.90; p>0.05]. The mean scores of affective engagements of public school students were higher than those of private school students. This difference was statistically significant [t(351)=-2.25; p<0.05]. The mean scores of cognitive engagement of public school students were higher than those of private school students. This observed difference in the scores was statistically significant [t(351)=-3.586; p<0.05]. When compared the school engagement total scores between private and public school students, it was observed that the scores of public school students were higher. This difference was statistically significant, as well [t(351)=-2.61; p<0.05].

Results Regarding Middle School Students' Level of Learning Responsibility

The analyses started with the examination of descriptive statistics. Table 6 presents descriptive statistics regarding the scores obtained from the Learning Responsibility Scale.

Table 6Descriptive Statistics on Learning Responsibility

Scale	Variables	Min. Value	Max. Value	\bar{X}	sd
Learning Responsibility	Learning Responsibilities During the Course	13	52	43.29	7.26
	Learning Responsibilities Outside the Course	11	44	30.40	8.44
	Total	25	96	73.69	14.44

As can be seen in Table 6, the lowest score obtained was 25 and the highest score was 96. For the learning responsibilities during the course subscale, the lowest score obtained was 13 and the highest score was 52. The mean score for learning responsibilities during the course is 43.29, indicating that students take on a moderately high amount of responsibility within the course. For the learning responsibilities outside the course subscale, the lowest score obtained was 11 and the highest score was 44. For learning responsibilities outside the course, the mean score is 30.40, indicating that students also demonstrated a moderately high amount of responsibility outside of course activities. The total mean score for learning responsibility is 73.69, with a standard deviation of 14.44, showing a relatively high level of overall responsibility, combining both in-class and out-of-class responsibilities.

Results on the Level of Learning Responsibility by Gender in Middle School Students

The data collected to determine whether students' levels of school engagement differed by gender were analyzed using an independent samples *t*-test. The results of the analysis are presented in Table 7.

Table 7 *Independent Samples t-Test Results on Learning Responsibility of Middle School Students by Gender*

Scale/Subso	cale	Gender	Ν	\bar{x}	sd	t	df	р
Learning	Responsibilities	Female	186	44.62	6.98	3.71	351	0.00*
During the	Course	Male	167	41.80	7.29			
Learning	Responsibilities	Female	186	31.71	7.96	3.11	351	0.00*
Outside the	Outside the Course	Male	167	28.94	8.73			
Learning	Responsibility	Female	186	76.33	13.57	3.69	351	0.00*
Total		Male	167	70.74	14.85			

^{*}p<0.05

The analysis results indicated that the learning responsibilities during the course mean scores of female students were higher than those of male students. This difference between female and male students was statistically significant [t(351)=3.71; p<0.05]. Secondly, the results demonstrated that the mean scores of learning responsibilities outside of the course of female students were higher than those of male students. This difference in the scores between female and male students was also statistically significant [t(351)=3.11; p<0.05]. Lastly, the analysis revealed that the learning responsibility total scores of female students were higher

than those of male students. This difference in the total scores between female and male students was also statistically significant [t(351)=3.69; p<0.05].

Results on the Level of Learning Responsibility by Grade Level in Middle School Students

The data collected to determine whether students' learning responsibility differed by grade level were analyzed using ANOVA. The results of the analysis are presented in Table 8.

Table 8ANOVA Results on Learning Responsibility of Middle School Students by Grade Level

Scale/Subs	cale	Grade Level	Ν	x	sd	F	df	р	Significant Difference
Learning	Responsibilities	5th Grade	118	42.58	6.99				
During the	Course	6th Grade	85	42.28	8.42	2.14	3	0.09	-
		7th Grade	62	44.61	7.38		349		
		Table 8 Cont	•			_			
		8th Grade	88	44.26	6.09				
Learning Responsibilities		5th Grade	118	29.41	8.12				7th Grade>5th Grade
Outside th	e Course	6th Grade	85	28.46	8.08	4.68	3	0.00*	7th Grade>6th Grade
		7th Grade	62	32.50	8.81		349		
		8th Grade	88	32.13	8.41				
Learning	Responsibility	5th Grade	118	71.99	13.54				7th Grade>5th Grade
Total		6th Grade	85	70.74	15.03	4.00	3	0.00*	7th Grade>6th Grade
		7th Grade	62	77.11	15.37		349		
		8th Grade	88	76.39	13.61				

*p<0.05

As seen in Table 8, there was no statistically significant difference in the mean scores of learning responsibility during the course among the grade level categories [F(3,349)=2.14; p>0.05]. However, there was a statistically significant difference in the mean scores of learning responsibility outside of the course among the grade level categories [F(3,349)=4.68; p<0.05]. Lastly, there was a statistically significant difference in the total scores of learning responsibility among the grade level categories [F(3,349)=4.00; p<0.05]. Tukey-B test was conducted to determine the specific categories contributing to these differences. According to the analysis results, the learning responsibilities outside the course of seventh-grade students were higher than the scores of fifth and sixth-grade students. Therefore, the learning responsibilities outside the course of seventh-grade students. In addition, the learning responsibility total scores of seventh-grade students were higher than those of fifth and sixth-grade students. Therefore, the learning responsibilities of seventh-grade students significantly differed from those of fifth and sixth-grade students. Therefore, the learning responsibilities of seventh-grade students significantly differed from those of fifth and sixth-grade students.

Results Regarding the Level of Learning Responsibility of Middle School Students Based on School Type

The data collected to determine whether students' learning responsibilities differed according to school type were analyzed using the independent samples *t*-test. The results of the analysis are presented in Table 9.

Table 9Independent Samples t-Test Results on Learning Responsibility of Middle School Students by School Type

Scale/Subscale	School Type	Ν	\bar{X}	sd	t	df	р
Learning Responsibilities	Private	212	42.37	7.75	-2.92	351	0.00*
During the Course	Public	141	44.66	6.23			
Learning Responsibilities	Private	212	29.27	8.17	-3.11	351	0.00*
Outside the Course	Public	141	32.09	8.58			
Learning Responsibility	Private	212	71.65	14.49	-3.29	351	0.00*
Total	Public	141	76.75	13.86			

^{*}p<0.05

As seen in Table 9, the mean scores of public school students for learning responsibility during the course were higher than those for private school students. This difference was also statistically significant [t(351)=-2.25; p<0.05]. Similarly, the mean scores of public school students for learning responsibility outside of the course were higher than those for private school students. This observed difference was statistically significant, as well [t(351)=-3.11; p<0.05]. Lastly, the learning responsibility total scores of public school students were higher than those of private school students. This difference was also statistically significant [t(351)=3.69; p<0.05].

Results on the Prediction of Learning Responsibility by School Engagement in Middle School Students

Within the scope of the third research question, the predictive power of school engagement on learning responsibility in middle school students was examined. Firstly, whether there was a relationship between school engagement and learning responsibility was investigated using Pearson correlation analysis. The data related to the analysis are presented in Table 10.

Table 10Results of the Correlation Analysis Between School Engagement and Learning Responsibility

Scale/Subscale	Behavioral Engagement	Emotional Engagement	Cognitive Engagement	School Engagement
Learning Responsibilities During the Course	0.63***	0.60***	0.70***	0.78***
Learning Responsibilities Outside the Course	0.31***	0.47***	0.72***	0.66***
Learning Responsibility	0.50***	0.57***	0.77***	0.78***

^{***}p<0.001

As seen in Table 10, there is a statistically significant strong positive relationship between behavioral engagement and learning responsibilities during the course (r=0.63; p<0.001). There was a statistically significant weak positive relationship between behavioral engagement and learning responsibilities outside the course (r=0.31; p<0.001). There was a statistically significant strong positive relationship between emotional engagement and learning responsibilities during the course process (r=0.60; p<0.001). There was a statistically significant moderate positive relationship between emotional engagement and learning responsibilities outside of the course (r=0.47; p<0.001). There was a statistically significant strong positive

relationship between cognitive engagement and learning responsibilities during the course (r=0.70; p<0.001). There was a statistically significant strong positive relationship between cognitive engagement and learning responsibilities outside the course (r=0.72; p<0.001). There was a statistically significant strong positive relationship between cognitive engagement and learning responsibility (r=0.77; p<0.001). Finally, there was a statistically significant strong positive relationship between school engagement and learning responsibility (r=0.78; p<0.001). Following this relationship, three multiple linear regression analyses were conducted. The results of the analyses are presented in Table 11, 12 and 13.

Table 11Results on the Predictive Power of Behavioral Engagement, Emotional Engagement and Cognitive Engagement on Learning Responsibilities During the Course in Middle School Students

Variables	В	SE	β	t	F	R2
Constant (a)	13.19	1.29		10.22		0.65
Behavioral Engagement	0.97	0.09	0.37	10.31***	215.24***	
Cognitive Engagement	0.54	0.05	0.43	10.60***	215,24****	
Emotional Engagement	0.30	0.07	0.19	4.70***		

Table 11 illustrates the multiple linear regression analysis of the sub-dimensions of school engagement (Behavioral Engagement, Emotional Engagement and Cognitive Engagement) and learning responsibilities during the course. The findings demonstrated that all the dimensions significantly predicted learning responsibility during the course in a positive way and school engagement explained 65% of the variance in learning responsibilities during the course. [F=215.24; p<0.001; R2=65%]. Considering Cohen's measures, the effect size was calculated as 1.857, which meant very large, (1.45 \leq Cohen's d) (Dinçer, 2014).

Table 12Results on the Predictive Power of Behavioral Engagement, Emotional Engagement and Cognitive Engagement on Learning Responsibilities Outside the Course in Middle School Students

Variables	В	SE	β	t	F	R2
Constant (a)	8.02	1.75		4.60		
Behavioral Engagement	-0.02	0.13	-0.01	-0.13	127.92***	0.52
Cognitive Engagement	0.99	0.07	0.68	14.41***		
Emotional Engagement	0.13	0.09	0.71	1.51		

Table 12 presents the multiple linear regression analysis of the sub-dimensions of school engagement (Behavioral Engagement, Emotional Engagement and Cognitive Engagement) and learning responsibilities outside the course. The findings revealed that among the sub-dimensions, only cognitive engagement significantly predicted learning responsibility outside the course in a positive way [F=127.92; p<0.001; R2=52%]. As for the effect size, Cohen's effect value was calculated as 1.083, referring to a very large effect (Dinçer, 2014).

Table 13Results on the Predictive Power of School Engagement on Learning Responsibilities in Middle School Students

Variables	В	SE	β	t	F	R2
Constant (a)	20.08	2.31		8.71	564.47***	0.62
School Engagement	1.05	0.04	0.79	23.76		

Table 13 presents the multiple linear regression analysis of overall school engagement and learning responsibilities. The findings revealed that school engagement predicted learning responsibilities significantly in a positive way [F=564.47; p<0.001; R2=62%]. Based on Cohen's measures, the effect size was calculated to be 1.632, indicating a very large effect (1.45 \leq Cohen's d) (Dinçer, 2014).

Discussion

The findings of the study indicated that variables such as gender, grade level, and school type had an influence on students' level of school engagement. School engagement is considered a psychological construct encompassing behavioural, emotional and cognitive factors (Jimerson et al., 2003). In the current study, students' levels of school engagement showed significant differences based on gender. In other words, female students exhibited significantly higher levels of school engagement across the behavioural, emotional, and cognitive dimensions of school engagement. This could be attributed to the higher trust of female students in their schools and teachers, and their greater value placed on friendships at school, and their lower rates of absenteeism. This assertion finds support in various studies. For example, Wang and Eccles (2012) found consistent gender differences in the three types of school engagement, indicating that female students tend to have higher levels of engagement. This is further corroborated by Musso et al. (2022), who reported that females are more engaged with school than boys. Additionally, Pyne (2020) highlighted that educators and parents typically perceive behaviourally engaged students as eager to learn, follow school rules, and get along with others, traits that are often more pronounced in female students. However, school engagement cannot be solely attributed to gender; it is a complex phenomenon influenced by regional and cultural factors, student age, social relationships within the school, as well as family and peer environments (Simons-Morton & Crump, 2003). Understanding school engagement requires a comprehensive analysis that considers the intricate interplay of various factors beyond gender alone.

When the effect of grade level on the level of school engagement was evaluated, it was found that eighth-grade students had significantly higher levels of cognitive engagement compared to fifth and sixth-grade students. Additionally, the results revealed that seventh-grade students had higher school engagement scores than sixth-grade students. This indicates that students' level of school engagement may vary depending on their grade level. Differences between grade level and school engagement may be influenced by students' different characteristics, needs, and expectations. During adolescence, students show different patterns of school engagement, indicating that while many might experience a decrease in their involvement, others remain consistent or even become more engaged in school activities (Li &

Lerner, 2011). This variation can be linked to the stress related to high school placement exams, which is especially intense in eighth grade. Given that eighth-grade students might face academic pressures related to high school placement exams during their academic year, the rationale behind the lower levels of school engagement can be understood. The transition process for fifth-grade students to middle school and the different academic loads also influence levels of school engagement. Upon reaching seventh grade, it is believed that students develop a stronger sense of belonging to the school, their teachers, classes, and friends. Some students may temporarily distance themselves from school but later show renewed school engagement. Additionally, some students may display indifferent or negative attitudes towards school despite being successful academically. Therefore, to understand the differences between grade level and school engagement, factors such as students' personality traits, individual differences, family relationships, friendships, and social lives need to be considered (Lombardi et al., 2019; Vidić, 2021). The results of the study also indicated that only the cognitive engagement of eighth-grade students significantly differed from that of other grade-level students, not emotional or behavioural engagement. Eight graders are typically at a more advanced stage of cognitive development, which allows them to handle more complex tasks, engage in abstract thinking, and participate in more sophisticated learning activities (Wang & Peck, 2013). This could lead to higher levels of cognitive engagement, as they are better able to process, analyze, and integrate the information being presented in class. However, their behavioural and emotional engagement might be influenced by external factors such as friendship, classroom environment, and sense of belonging (Ackert, 2018; Luo et al., 2019).

Considering the level of school engagement based on school type, the results indicated statistically significant differences between students attending private and public schools. Students attending public schools had significantly higher levels of school engagement. This difference was also observed in the emotional and cognitive engagement dimensions. In developing countries, students attending public schools, often from lower socioeconomic backgrounds, may be motivated by the desire to obtain a profession through education (Çevik, 2005). Additionally, various projects aimed at enhancing students' school engagement and positive encouragement of students may have contributed to the high levels of school engagement, particularly in public schools. However, students attending private schools have access to various opportunities inside and outside of school due to their financial means. Therefore, they can socialize, develop themselves, and shape their lives not only within school but also through extracurricular activities. Hence, it can be considered natural for schools become more meaningful domains for students attending public schools (Kandemir, 2015). The findings also revealed that there were substantial differences in cognitive and emotional engagement among school types, but not in behavioural engagement. The lack of a significant difference in behavioural involvement between public and private school children shows that school type may not have a significant impact on students' outward participation, effort, or classroom behaviour. Several factors influence behavioural engagement, including classroom management techniques, instructor expectations, and individual student motivation (Larson et al., 2020; Mikami et al., 2017). These elements may be very similar in both public and private school settings, especially if both cultures emphasize similar behavioural standards and expectations.

Several studies provide relevant evidence that school engagement can be associated with the aforementioned factors. For example, Weiss and Baker-Smith (2010) found that the school type attended during the middle grades is significantly related to academic outcomes in the 9th-grade year, indicating a link between school type and student engagement. In another study, Malone et al. (2019) demonstrated that eighth-grade pass rates were significantly higher in middle schools compared to high schools, suggesting a potential impact of grade configuration on student engagement and academic performance. Alp's (2017) research with middle school students revealed that students in public schools experienced a greater sense of belonging compared to students in private schools. While gender, grade, and school type differences in school engagement exist, they are part of a broader landscape that includes regional, cultural, social, and familial influences. Understanding school engagement requires a comprehensive analysis that considers the intricate interplay of various factors beyond gender alone.

When examining students' levels of learning responsibility, results favoring female students were found to be similar to school engagement based on gender, and it was observed that female students scored significantly higher in both the dimensions of learning responsibility during the course and outside the course. These findings indicate that gender is also influential on learning responsibility. Research suggests that female students typically participate more actively in the classroom and often develop stronger connections with their teachers. Wicaksono et al. (2022) found that female students are more likely to communicate with teachers, which points to a more engaged and responsive learning style compared to male students. Although the differences in learning styles between male and female students are thought to have an impact on the results, it is predicted that this situation will explain the different approaches of students with different learning styles regarding learning responsibility. While female students generally engage in a learning process in the classroom by establishing relationships with their teachers thanks to their abilities to connect more socially and emotionally, male students may be less focused on their surroundings and more reluctant to communicate directly with teachers. Therefore, the tendency of female students to strengthen their communication with teachers compared to male students can also come into play as a factor affecting learning responsibility (Markus et al., 2022; Rudasill et al., 2010).

The results revealed no statistically significant difference in the mean scores of learning responsibility during the course among the grade level categories. However, there was a statistically significant difference in the mean scores of learning responsibility outside of the course among the grade level categories and seventh-grade students had higher levels of learning responsibility outside the course compared to students in fifth and sixth-grades. The capacity and willingness of students to take responsibility for their own learning can be determined by their behaviours in understanding a subject, preparing for class, reviewing and revising, and completing assignments. While some students may exhibit a sense of learning responsibility, others may struggle or be reluctant to take on responsibility, which can be explained by various factors (Ayish & Deveci, 2019). The increased awareness of seventh-grade students regarding entrance exams to high school and taking school more seriously than fifth and sixth-grade students may have contributed to their higher levels of responsibility. However, the lack of significant differentiation among eighth-grade students may be attributed to increased anxiety about exams as the exams approach and an increase in avoidance behaviours. Research suggests that eighth grade is a critical time when students face important

decisions about course selection and academic challenges, which can influence their performance and future educational pathways (Reilly et al., 2017). In addition, given the organized context of a classroom, students acquire responsibility in similar ways throughout grades. The classroom setting provides help in the form of a guiding teacher, a timetable, and peer interaction. These might have created a similar atmosphere in which learning responsibility is largely consistent across grade levels. These factors can help students remain responsible for their learning since they can better manage their coursework (Sartika, 2024; Yekta & Alighadr, 2016). Outside of the classroom, however, students have less structure and must rely on their own motives and self-control. This may be more difficult for young children, who rely on their parents or teachers to complete learning activities. Compared to them, a seventh-grade student who is developmentally more mature might be better equipped to handle these responsibilities independently. As students continue their educational journey, their ability to self-manage and accept responsibility for their learning improves and this allows them to adapt more successfully to situations that require intrinsic motivation (Istiqomah et al., 2021; Macintyre et al., 2020).

While students attending public schools demonstrated significantly higher levels of learning responsibility, this notable difference was observed both in academic processes and extracurricular learning responsibilities. Private schools generally have greater financial resources, providing their students with a broader learning environment and more opportunities. These opportunities may enhance students' levels of learning responsibility. However, having a more rigorous educational system than public schools may also be a contributing factor to private school students neglecting their learning responsibilities (Dang & Rogers, 2008). When students feel pressure, they may exhibit behaviors of avoidance and neglect (Jiang et al., 2022). In this regard, both the larger class sizes and the lower educational intensity in public schools compared to private schools may have been effective in enabling students to manage the process and take responsibility through their own efforts.

Several studies have reported similar findings regarding learning responsibility. For example, Golzar (2006) investigated the impact of gender on learning responsibility and found that female students exhibited a notably greater sense of responsibility than their male counterparts. Additionally, the study revealed a significant and positive correlation between academic achievement and the perception of responsibility. Yeşil (2015) conducted a study with high school students to examine the effect of school type on learning responsibility and found that school type caused a significant difference in the level of learning responsibility and all its sub-dimensions. While seventh-grade students may exhibit increased responsibility and awareness due to factors like high school entrance exams, eighth-grade students may face heightened anxiety and avoidance behaviors as they approach crucial exams and decisions about their academic paths. Teachers' influence on student motivation and achievement, as well as the impact of anxiety and motivation on performance, are essential considerations in understanding the dynamics of student behavior and academic outcomes during critical middle school years.

A positive and significant relationship was identified between students' school engagement and learning responsibilities in the study. This relationship was consistent with both the dimensions of learning responsibility during the course and outside the course. When considering the predictive power of school engagement on learning responsibility, it was

concluded that all the dimensions significantly predicted learning responsibility during the course in a positive way and school engagement explained 65% of the variance in learning responsibilities during the course. These findings highlight the importance of fostering cognitive, behavioural, and emotional engagement during class time, as all three play a critical role in shaping students' learning responsibilities within the classroom context. This can be ensured by adopting a multifaceted approach including maintaining well-organized classrooms (Rim-Kaufman et al., 2015), implementing appropriate instructional strategies that promote these constructs (Barlow et al., 2020), utilizing correct assessment methods (Barlow & Brown, 2020), and providing autonomy support (Lu et al., 2022). However, the findings revealed that among the sub-dimensions, only cognitive engagement significantly predicted learning responsibility outside the course in a positive way with a variance of 52%. These findings emphasize that cognitive engagement plays a central role in motivating and enabling students to take responsibility for learning activities beyond the classroom. Behavioural and emotional engagement, however, may be more relevant to in-class activities rather than independent, outside-the-classroom tasks. Cognitive engagement, which includes psychological interest and drive to learn, was found to be an essential factor in defining students' learning responsibilities both within and outside of the classroom (Kusmaryono, 2023). Behavioural engagement, which includes students' behaviours and participation in classroom activities, and emotional engagement are more directly related to in-class learning experiences (Larasaty & Yulianawati, 2019). Cognitive engagement, however, is critical in inspiring and empowering students to take responsibility for their learning inside and outside the classroom. Despite this distinction, school engagement continues to have a substantial impact on students' overall learning experiences in the classroom. By addressing all three dimensions, effective teaching practices can create a balanced and supportive learning environment that meets the diverse requirements of students (Naibert & Barbera, 2022). The findings also revealed that school engagement predicted learning responsibilities significantly in a positive way with 62% of variance. Overall school engagement—encompassing behavioural, emotional, and cognitive aspects—is a critical determinant of students' learning responsibilities. Promoting engagement in these areas can lead to positive academic outcomes and help students develop a sense of ownership and investment in their own learning process (Estévez et al., 2021; Griffin et al., 2020; Parra-Pérez, 2023).

Conclusion and Implications

In conclusion, the research results indicated that students' levels of school engagement and learning responsibility can vary depending on various factors. These results can be beneficial for educators in developing different strategies to enhance students' level of school engagement and learning responsibility. Based on the results, creating a learning environment where children feel connected can also increase their sense of learning responsibility. When teachers promote both in-class and out-of-class socialization, encourage students to express themselves, and opt for activities that foster student cohesion, students' learning responsibility can increase, which in turn may positively impact their academic achievement. Providing regular and constructive feedback to students and supporting their learning process can contribute positively to the development of school engagement and learning responsibility. Additionally, it is important to remember that societal concepts of school, education, and teaching should be reconsidered to enhance levels of school engagement and learning

responsibility. Based on the results, the following recommendations can be made to support future studies:

- Teachers should create classroom environments that foster a sense of belonging and connection among students, as this can enhance both school engagement and learning responsibility.
- Lesson designs and programs related to school engagement and learning responsibility can be developed, and the impact of these programs on students can be investigated. Thus, roadmaps can be drawn up for the development of these critical concepts.
- This study was conducted using cross-sectional methods by collecting and analyzing data from fifth, sixth, seventh, and eighth-grade students. However, longitudinal studies are believed to yield meaningful results in examining students' levels of school engagement and learning responsibility over time.
- Teachers should develop engagement strategies that cater to the diverse needs and interests of students. This could include integrating student interests into the curriculum and employing a variety of teaching methods to accommodate different learning styles.

Author Contributions

All authors contributed equally to the entire study.

Declarations

Ethical Approval and Informed Consent

This study was approved by Bahçeşehir University Institutional Ethical Review Board. All procedures in this study were conducted in accordance with Bahçeşehir University Institutional Review Board's approved protocols. Written informed consent was obtained from the participants for their anonymized information to be published in this article.

Supplemental Material

There are no supplemental materials for this paper.

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TÜRKÇE GENİŞ ÖZET

Ortaokul Öğrencilerinde Okula Bağlılık ve Öğrenme Sorumluluğu Giriş

Eğitim ve öğretim, bireyin yaşamında önemli bir rol oynayan süreçlerdir. Bu süreç, çocukluktan yetişkinliğe kadar uzanarak bireyin yaşamının önemli bir kısmını kapsar. Bu bağlamda, özellikle okullar; bireyin sosyal becerilerini geliştirdiği, toplumla etkileşimde bulunduğu, öğrenme deneyimlerini yaşadığı önemli kurumlardır (Boud, 1988; Lee & Smith 2001; Lodge, 2007; Shavelson & Huang, 2003). Ancak birçok öğrencinin okula bağlılık düzeyi, sadece bilgi ve beceri kazanma süreciyle değil, aynı zamanda duygusal, bilişsel ve davranışsal faktörlerle de şekillenmektedir. Literatürde cinsiyet açısından öğrencilerin okula bağlılık düzeylerinin genellikle kız öğrencilerde daha yüksek olduğu belirtilmiş, ancak öğrenme sorumluluğu ile cinsiyet arasındaki ilişki belirgin bir şekilde ele alınmamıştır. Benzer şekilde, sınıf seviyeleri açısından da öğrencilerin okula bağlılık ve öğrenme sorumluluğu düzeyleri arasındaki değişimler yeterince ele alınmamıştır. Bu nedenle, daha fazla araştırma yapılması ve bu faktörlerin öğrencilerin okula bağlılık ve öğrenme sorumluluğu üzerindeki etkilerinin daha kapsamlı bir şekilde incelenmesi gerekmektedir (Arastaman, 2009; Aydın, 2018; Jenkins, 1997; Kahraman, 2014; Kalaycı & Özdemir, 2013; Lau vd., 2018; Savi, 2011). Okul bağlılığıyla ilgili mevcut araştırmalar genellikle genel faktörleri ele almakla birlikte, öğrencilerin okula bağlılık düzeyini anlamak ve geliştirmek için yapılan araştırmaların, eğitim sistemine ve paydaşlarına önemli katkılar sağlaması gerekmektedir. Okula bağlılığın artırılması; öğrencilerin genel yaşam kalitesini, akademik başarılarını ve toplumsal uyumlarını olumlu yönde etkileyecektir (Dönmez, 2016). Bu araştırmanın amacı, öğrencilerin okula bağlılık düzeyini etkileyen faktörleri derinlemesine incelemek ve bu faktörlerin öğrenci başarısı ve yaşam kalitesi üzerindeki etkilerini anlamaktır.

Yöntem

Bu araştırmada nicel araştırma yöntemlerinden ilişkisel tarama modeli kullanılmıştır. Araştırmanın örneklemini 2022-2023 eğitim-öğretim yılında İstanbul ili Üsküdar ilçesinde özel ve devlet okullarında öğrenim gören 353 ortaokul öğrencisi oluşturmaktadır. Araştırmanın verilerinin toplanması için Kişisel Bilgi Formu, Okula Bağlılık Ölçeği ve Öğrenme Sorumluluğu Ölçeği kullanılmıştır. Araştırmada betimleyici istatistikler, bağımsız örneklem *t*-testi, ANOVA, korelasyon ve çoklu doğrusal regresyon analizi tekniklerinden yararlanılmıştır.

Bulgular

Davranışsal bağlılık boyutu incelendiğinde, kız öğrencilerin davranışsal bağlılık toplam puan ortalamaları, erkek öğrencilerin davranışsal bağlılık toplam puan ortalamalarından daha yüksektir. Görülen bu fark istatistiksel olarak da anlamlıdır $[t(351)=4.31;\ p<0.05]$. Sınıf düzeyi kategorilerine göre okula bağlılık düzeyi davranışsal bağlılık alt boyut toplam puan ortalamaları arasında istatistiki olarak anlamlı bir farklılık yoktur $[F(3.349)=2.42;\ p>0.05]$. Benzer bir şekilde, duyuşsal bağlılık alt boyut toplam puan ortalamaları arasında istatistiki olarak anlamlı bir farklılık bulunmamaktadır $[F(3.349)=2.48;\ p>0.05]$. Fakat bilişsel bağlılık alt boyut toplam puan ortalamaları arasında istatistiki olarak anlamlı bir farklılık vardır $[F(3.349)=5.84;\ p<0.05]$. Özel ve devlet okulu öğrencilerinin genel toplam puan ortalamaları karşılaştırıldığında devlet okulu öğrencilerinin okula bağlılık toplam puan ortalamalarının daha yüksek olduğu görülmektedir. Görülen bu fark, istatistiksel olarak da anlamlıdır $[t(351)=-2.61;\ p<0.05]$.

Kız öğrencilerin ders süreci öğrenme sorumlulukları alt boyut toplam puan ortalamalarının, erkek öğrencilerin ortalamalarından daha yüksek olduğu görülmektedir. Kız ve erkek öğrencilerin ders süreci öğrenme sorumlulukları alt boyutu toplam puan ortalamalar arası bu fark istatistiksel olarak anlamlıdır [t(351)=3.71; p<0.05]. Sınıf düzeyi kategorilerine göre öğrenme sorumluluğu genel toplam puan ortalamaları arasında istatistiki olarak anlamlı bir farklılık vardır [F(3,349)=4.00; p<0.05]. Devlet okulu öğrencilerinin ders süreci öğrenme sorumlulukları alt boyut toplam puan ortalamaları incelendiğinde, devlet okulu öğrencilerinin ortalamalarının, özel okul öğrencilerinin ortalamalarından daha yüksek olduğu görülmektedir. Görülen bu fark istatistiksel olarak da anlamlıdır [t(351)=3.69; p<0.05].

Okula bağlılık ile öğrenme sorumluluğu arasında istatistiksel olarak anlamlı pozitif yönde güçlü bir ilişki vardır (r=0.78; p<0.001). Ayrıca, okula bağlılığın ders süreci öğrenme sorumluluğunu ve ders dışı öğrenme sorumluluğunu istatistiksel olarak anlamlı bir şekilde yordadığı görülmüştür [F(2.35)=324.13; p<0.001].

Tartışma

Araştırmadan elde edilen bulgular, cinsiyet, sınıf düzeyi ve okul türü gibi değişkenlerin öğrencilerin okula bağlılık düzeyi üzerinde etkili olduğunu ortaya koymaktadır. Okula bağlılık çok boyutlu yapısı ile içeriğinde bilişsel, duyuşsal ve davranışsal faktörleri de barındıran psikolojik bir bütün olarak değerlendirilir (Jimerson vd., 2003). Mevcut araştırmada öğrencilerin okula bağlılık düzeyleri, cinsiyet değişkenine bağlı olarak anlamlı farklılıklar göstermektedir. Ayrıca yedinci sınıftaki öğrencilerin okula bağlılık puanlarının, altıncı sınıftakilerden daha yüksek olduğu görülmüştür. Bu durum, öğrencilerin okula bağlılık düzeyinin sınıf düzeyine bağlı olarak değişebileceğine işaret etmektedir. Okul türü değişkeninin okula bağlılık düzeyine etkisi değerlendirildiğinde, özel ve devlet okullarında okuyan öğrenciler arasında istatistiksel olarak anlamlı farklılıklar olduğu görülmüştür. Devlet okullarında okuyan öğrencilerde, özellikle gelişmekte olan ülkelerde, maddi durumu daha düşük kesimde yer almaları, okuyarak bir meslek sahibi olma isteklerini pekiştiren bir unsur olarak devreye girebilir (Çevik, 2005).

Öğrencilerin öğrenme sorumluluğu düzeyleri incelendiğinde, cinsiyet değişkenine bağlı olarak kız öğrencilerin lehine bir sonuçla karşılaşılmış ve hem ders süreci hem de ders dışı öğrenme sorumluluğu boyutunda kız öğrencilerin anlamlı derecede yüksek puanlar aldıkları görülmüştür. Bu sonuç kız öğrencilerin, erkek öğrencilere göre öğretmenleriyle iletişimlerini sağlamlaştırma eğilimleri de öğrenme sorumluluklarına etki eden bir faktör olarak kaynaklanmasından dolayı devreye girmiş olabilir (Markus vd., 2022; Rudasill vd., 2010). Sınıf düzeyi değişkenine göre yedinci sınıftaki öğrencilerin öğrenme sorumluluğu ve ders süreci öğrenme sorumluluklarının da beşinci ve altıncı sınıfta olan öğrencilerinden daha yüksek olduğu görülmüştür. Yedinci sınıf öğrencilerinin sorumluluk düzeylerinin yüksek olmasında liseye giriş sınavları konusunda daha küçük sınıflara göre farkındalıklarının artmış olması ve okulu beşinci ve altıncı sınıf öğrencilerine oranla daha fazla ciddiye almaları etkili olmuş olabilir. Ancak sekizinci sınıf öğrencilerinin bu anlamlı farklılaşmaya dâhil olmamasının altında yatan neden olarak sınav yaklaştıkça sınava ilişkin kaygıların artması ve kaçınma davranışlarının çoğalması düşünülmektedir (Reilly vd., 2017).

Öğrencilerin okula bağlılıkları ile öğrenme sorumlulukları arasındaki ilişki incelendiğinde okula bağlılık ve öğrenme sorumluluğu arasında pozitif yönde ve anlamlı bir ilişki olduğu görülmüştür. Bu ilişki, ders süreci ve ders dışı öğrenme sorumlulukları alt boyutlarıyla da uyumludur. Okula bağlılığın öğrenme sorumluluğunu yordama gücü ele alındığında, okula bağlılığın ders süreci ve ders dışı öğrenme sorumluluklarını %62 oranında pozitif yönde açıklayıcı etkisi olduğu sonucuna varılmıştır.

Sonuç ve Öneriler

Sonuç olarak, araştırma bulguları, öğrencilerin okula bağlılık ve öğrenme sorumluluğu düzeyinin çeşitli faktörlere bağlı olarak değişebileceğini göstermektedir.

- Öğretmenler, öğrenciler arasında aidiyet duygusunu destekleyici sınıf ortamları yaratmalıdır. Bu durum hem okul bağlılığını hem de öğrenme sorumluluğunu artırabilir.
- Okula bağlılık ve öğrenme sorumluluğuyla ilgili ders tasarımları, programlar geliştirilmelidir ve geliştirilen bu programların öğrenci üzerindeki etkisi araştırılmalıdır.
- Bu çalışma kesitsel yöntemlerle yürütülmüştür. Gelecekte yapılacak olan boylamsal çalışmalarla öğrencinin süreç içerisinde okula bağlılık ve öğrenme sorumluluğu düzeyleri incelenmelidir.
- Öğretmenler, öğrencilerin çeşitli ihtiyaç ve ilgi alanlarına hitap eden bağlılık stratejileri geliştirmelidir. Bu, öğrenci ilgi alanlarını öğretim programlarına entegre etmeyi ve farklı öğrenme tercihlerine hitap etmek için çeşitli öğretim yöntemleri kullanmayı içerebilir.