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Vol. 82, No. 1, 2024
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TURKISH PRIMARY SCHOOL STUDENTS' INVOLVEMENT IN CLASSROOM ACTIVITIES

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Abstract

Measuring students' interest and involvement in classroom activities at all stages of education, from pre-school to upper secondary school, provides a better understanding of learning processes that enable the acquisition of abilities specific to a certain field. The purpose of this cross-age study was to investigate primary school students' involvement level in classroom activities. The sample consisted of 560 students studying in the first, second, third, and fourth grades at primary schools affiliated with a city in Turkey's inner Aegean area. The data were collected through "The Demographic Information Form" and "Leuven Involvement Scale". The research revealed that students in the 1st, 2nd, 3rd, and 4th grades in primary school had a moderate involvement level. It was found that there was a significant difference between the involvement levels of primary school students and the gender, course type, and professional experience of the teacher, but there was no significant difference between the grade levels of the students. It was recommended to use current methods and strategies to increase the level of involvement of students in classroom activities and to make arrangements to improve involvement in the learning environment.
Keywords: *behavioral engagement, cross-age study, level of involvement, primary school, primary student*

Introduction

The quality of learning processes and the factors affecting academic achievement in different levels of education have been increasingly emphasized in recent years. Research on students' interactions with educational settings and the opportunities that enhance their learning processes has gained traction. Student involvement is an indicator of students' interest in learning environments, indicating a complementary interaction between students and school activities (Ainley, 2012). Hence, an increasing number of researchers and educators focus on the concept of student involvement to effectively plan teaching processes and make necessary arrangements in learning environments.

There are different perspectives on the definition and evaluation of the concept of involvement (Sinatra et al., 2015). It has been expressed as a key cognitive tool that connects home, school, and society to students (Reschly & Christenson, 2012). Besides, it is defined as an important indicator of the development and learning process and a unique mental process that can be observed from infancy to adulthood (Laevers, 1993). The educational dimension of this concept is concerned with children's experiences, views, and decisions about their own lives as a whole (Leinonen et al., 2014). Students participating in classroom/school activities explore their own interests and abilities and thus take an active part in the learning process (Laevers,

https://doi.org/10.33225/pec/24.82.66 ISSN 1822-7864 (Print) ISSN 2538-7111 (Online)

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2005a). According to Finn ve Zimmer (2012), student involvement can be assessed at all levels of education because it is rooted in the learning process, and assessing student involvement at an early age is necessary to determine the academic failure that may arise in primary school and further levels of education.

Researchers have come up with various classifications regarding involvement, which is a multidimensional concept (Fredricks & McColskey, 2012). The two-dimensional classification consisting of behavioral and emotional dimensions (Finn, 1989; Ryan et al., 1994) expanded over time and evolved into a three-dimensional classification consisting of cognitive, emotional, and behavioral dimensions (Wigfield et al., 2008). Emotional engagement includes having fun in the classroom and having positive experiences in the classroom; cognitive engagement includes the ability to apply knowledge in everyday life and transfer it to the next level of education; and behavioral engagement includes behaviors such as participating in classroom dialogues, completing assigned tasks on time, and complying with school and classroom rules (Wang & Eccles, 2013). Also, behavioral engagement includes active involvement in classroom activities and doing academic tasks that positively affect the learning process (Baker et al., 2008). Listening to the teacher, participating in classroom discussions, and generating new ideas through discussions are related to behavioral engagement (Rimm-Kaufman et al., 2015). The behavioral engagement has been stated to be related to strength, concentration, interest, asking questions, and continuity (Blumenfeld et al., 2005).

Indicators of engagement, which provide important clues in determining students' level of classroom involvement (Laevers, 1993) are how much students concentrate, how much they participate in activities, and to what extent they realize their potential (Laevers & Declercq, 2018). Children with a high level of classroom involvement concentrate fully on the activity, are interested in the process, and are highly motivated. With their body language, gestures, and facial expressions, they show that they are involved in the process and take great pleasure in exploring (Laevers, 2005b). Studies conducted with primary school students have examined behavioral engagement, as it includes involvement in activities that require energy and attention (Lam et al., 2012; Robinson & Lubienski, 2011; Skinner & Pitzer, 2012). The current study focuses on behavioral engagement since it includes determining whether or not children are involved in the learning process and in-class activities based on specific features.

Behavioral engagement relates to students' efforts to participate in educational settings, their involvement in academic activities, and their efforts to complete academic tasks (Suarez-Orozco et al., 2009). Students with a high level of classroom involvement also realize their potential (Laevers, 1993). Primary school students' behaviors in the learning process are stated as academic behaviors (Finn & Zimmer, 2012). It is emphasized that students who exhibit academic behaviors such as paying close attention to classroom activities (Rowe & Rowe, 1992), doing the assigned homework (Cooper et al., 2001), and coming to class prepared are more successful (Finn & Zimmer, 2012). According to Korpershock et al. (2015), encouraging student engagement is necessary for ensuring students' academic achievement. Indeed, students learn more effectively when they participate in classroom activities and build strong relationships with their teachers. Teachers should utilize a variety of strategies to interest non-participating students and to guarantee that participating students continue to participate (Abdullah et al., 2011).

Dimensions such as teacher-student communication, learning environments, and teachers' experience are effective in student involvement (Subramainan & Mahmoud, 2020). Pianta et al. (2012) have emphasized that the positive climate and arrangements in the classroom, the adaptability of the learned knowledge to daily life, and the diversity of teaching methods and techniques have a positive effect on students' involvement levels. In addition, characteristics such as class size, teacher-student ratio, and class seating arrangement have also been found to be effective in classroom involvement (Blatchford, 2003; Helf et al., 2009; Ruble & Robson,

ISSN 1822-7864 (Print) ISSN 2538-7111 (Online) https://doi.org/10.33225/pec/24.82.66

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2007). The study conducted by Shernoff et al. (2016) has concluded that the quality of learning environments positively affects students' involvement levels, self-confidence, and academic achievement. It is also stated that apart from the classroom seating arrangement (DiCarlo et al., 2013; Laevers et al., 2012) students' interests in and motivations towards the learning environments (Hartz et al., 2017) and the teacher-student relationship (Dotterer & Lowe, 2011; Papadopoulou & Gregoriadis, 2017; Stroet et al., 2013) affect behavioral engagement. Research has also shown that the materials used in learning environments, technological tools, and teaching methods are effective in student involvement (Graue et al., 2007; Howes et al., 2008; Martin & Rimm Kaufman, 2015).

In the related studies, it has been seen that there is a relationship between the positive and supportive attitudes of teachers and the involvement levels of primary and secondary school students (Allen et al., 2013; Hafen et al., 2012; Marks, 2000). Ryan and Deci (2000) have argued teachers who consider psychological needs such as autonomy and competence support students' involvement levels. Teachers, who offer different activities to their students, support these activities with various teaching materials, and give encouraging feedback to students are more likely to support students' learning and increase their involvement levels (Van den Berghe et al., 2014; Vansteenkiste et al., 2009).

It is necessary to evaluate the level of involvement of students in order to determine the quality of existing programs (Raspa et al., 2001) and to predict students' academic success at later educational levels (Theodotou, 2015). Determining the involvement levels of primary school students is important in terms of determining whether students have achieved the necessary outcomes, evaluating learning processes (Laevers, et al., 2012; Lenaerts et al., 2017), organizing effective learning environments and understanding the cognitive, affective, and behavioral characteristics of students (Booth & Ainscow, 2016). In the literature, it is seen that there are a limited number of studies on determining the involvement levels of primary school students in classroom activities. These studies mostly focus on the associations between primary school students' classroom involvement levels and school climate (Yang et al., 2018), teacher-student interaction (Wang, 2017), students' social-emotional competencies (Papieska, 2019), peer relationships (Cappella et al., 2013) and motivation for engagement in physical education (Martinović et al., 2011).

In Turkey, it is seen that the relationship between primary school students' self-regulation strategies and motivational beliefs (Demircan & Tanrıseven, 2014), parental attitudes and school achievement (Nimsi, 2006), perceived classroom atmosphere (Künkül, 2008) and their level of involvement in classroom activities have been examined. In the research that examined students' involvement levels (Başal, 2001; Demirezen et al., 2016; Sarıtepeci & Yıldız, 2014), measurement instruments that weren't based on observation and were filled out only by students or teachers were used. In order to determine detailed and descriptive comments on students' involvement levels, it is especially important to make observational assessments (Cohen et al., 2011).

Research Focus

In this study, it is thought that evaluating the involvement levels of students with appropriate and objective tools guided the arrangements to be made to improve the involvement levels of primary school students.

https://doi.org/10.33225/pec/24.82.66 ISSN 1822-7864 (Print) ISSN 2538-7111 (Online)

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Research Aim and Research Questions

This study aimed to examine the involvement levels of primary school first, second, third, and fourth-grade students in Turkey in terms of different variables. Evaluating involvement, which is an important indicator of academic achievement and the learning process, with objective tools and examining the involvement and levels of students in terms of different variables contributed to the determination of the factors affecting the level of involvement and the arrangements to be made to increase the level of involvement.

Answers to the following questions were sought within the scope of the study:

- What is the level involvement of primary school 1st, 2nd, 3rd, and 4th grade students in classroom activities?
- How do the variables (gender, grade, course, and professional experience) influence the participants' involvement?

Research Methodology

Research Design

Studies in which students' understanding of a particular concept, attitudes, beliefs, and skills are examined according to their grade levels are defined as cross-age studies (Abraham et al., 1994; Ruane, 2005). Cross-age studies are especially preferred in terms of efficient time and practicality (Krnel et al., 2003). In the literature, it is seen that cross-age studies have been conducted to examine students' understanding of certain concepts at different levels such as secondary school (Ayas et al., 2010; Uzun et al., 2013), high school (Calik, 2005; Trumper, 2001) and undergraduate (Çalik et al., 2014; Karatas et al., 2011). A cross-age study was used in this research in which the involvement levels of primary school students in terms of different variables were examined.

Sample

The population of the research consisted of students attending primary schools affiliated with the Ministry of National Education, located in a city center in the inner Aegean region of Turkey, in the 2019-2020 academic year. The study sample was selected from an accessible population using a random sampling method. A list of primary schools was obtained from the Provincial Directorate of National Education, and random selection was made from low, middle, and high-level primary schools representing all three levels (Baştürk & Taştepe, 2013).

Based on the data obtained from the Provincial Directorate of National Education, the accessible population consisted of 41 schools and approximately 3,800 first, second, third, and fourth graders. The sample of the research included a total of 560 first, second, third, and fourth graders attending 14 primary schools affiliated with the Ministry of National Education, located in a city center in the inner Aegean region of Turkey. The sample size to be reached in the research was calculated with a margin of error of $\alpha = 0.05$ and it was determined that a sample group of at least 250 people should be reached (Büyüköztürk et al., 2017).

Of the students, 50.4% are girls, 49.6% are boys, 25% are first graders, 25% are second graders, 25% are third graders, and 25% are fourth graders. On the other hand, of the teachers included in the research, 52.1% are female, and 47.9% are male. Also, 23.9% of the teachers have teaching experience of 9-15 years, 28.2% 16-20 years, 19.7% 21-29 years, and 28.2% 30-40.

ISSN 1822-7864 (Print) ISSN 2538-7111 (Online) https://doi.org/10.33225/pec/24.82.66

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Instrument

To collect data about the students, parents, and classroom teachers participating in the study, a personal information form was developed by the researchers. The personal information form includes questions about students' gender, age, date of birth, class, teachers' gender, age, teaching experience, and department from which they graduated.

The Leuven Involvement Scale used in this research was developed by Laevers et al. (2010) to determine student involvement levels. This scale is an observation-based scale that rates student involvement levels from 1 (very low) to 5 (very high). If a student puts no mental effort into, shows no interest in, or pays no attention to any classroom activity, then their involvement level is rated as very low. If a student is distracted very often during classroom activities, then their involvement level is rated as low. If a student is partially interested in classroom activities, does not insist on completing them, or has a short attention span, then their involvement level is rated as moderate. On the other hand, if a student is not easily distracted throughout activities and is highly motivated to complete them, then their involvement level is rated as high. Finally, if a student gives full attention to classroom activities, is not distracted despite external distractions, has fun when doing activities, and does everything that the activity requires, then their involvement level is rated as very high (Laevers, 2017).

The scale consists of a total of two parts: involvement levels and the indicators to be considered about the involvement levels. Indicators to consider when determining student involvement are concentration, energy, complexity and creativity, facial expression and posture, persistence/tenacity, attention, reaction time, words, and satisfaction. These indicators provide important clues when determining classroom involvement levels. The scale does not score these indicators (Laevers et al., 2010). For instance, the concentration indicator example is described as follows: The child focuses his or her attention on the activity being performed. The child's attention is only diverted when confronted with strong stimuli. The energy indicator is as follows: Physical energy should be considered during physical activities. Sweating can also be considered when identifying involvement levels. Loud talking (shouting) and short-term actions can be considered physical elements in other activities. This is not to be confused with the expression of suppressed energy.

Reliability studies conducted for primary school students found inter-observer agreement coefficients to be between .61 and .91 (Boonen et al., 2013; Lietaert et al., 2015). The validity and reliability of the Turkish version of the Leuven Involvement Scale was carried out by Erdem (2021). To determine the content validity of the scale, the content validity ratio (CVR) of each item was calculated in the evaluation of the opinions of seven experts. Then, the content validity index (CVI) was determined by averaging the calculated CVIs (Lissizt & Samuelsen, 2007). The index value was calculated as 1.00 and it was determined that all items in the scale were necessary and content validity was achieved (Lawshe, 1975). Within the scope of the reliability study, the scale was administered to 100 students attending the primary schools included in the research permit together with the co-observer. The observers were present in the observation class at the same time and observed the students during the in-class activities carried out during the lesson hours simultaneously. The researcher and the co-observer observed each student three times at two-minute intervals. The inter-observer agreement was calculated with the Cohen Kappa coefficient (Kılıç, 2015). Inter-observer agreement coefficients were determined as ($\kappa = 0.991$, $p < .05$); in the first observations, ($\kappa = 0.994$, $p < .05$) in the second observations, and ($\kappa = 0.996$, $p < .05$); in the third observations, and it was concluded that the inter-observer agreement coefficients were perfect in all observations.

https://doi.org/10.33225/pec/24.82.66 ISSN 1822-7864 (Print) ISSN 2538-7111 (Online)

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Procedures

Prior to the data collection process, ethics committee permission (25.09.2019/2019-88) and research permission were obtained from the Provincial Directorate of National Education. An informed consent form was distributed to the parents of the students, and the scale was applied to the children of the parents who agreed to participate in the study.

The scale is an observation-based measurement tool, and observations to determine the student involvement levels need to be carried out at intervals (Laevers, 2017). During the observations, evaluations based on the characteristics to be considered regarding student involvement are recorded in the observation form. Primary school students' involvement levels in classroom activities are determined by observations made at three different intervals (lesson/activity) (Papieska, 2019).

Before starting the observations, appointments were made with the schools from which permission was obtained and school principals were informed about the purpose and stages of the research. The classes to be observed were determined together with the principals and teachers who volunteered to participate in the study. Then, the teachers of the determined classes were interviewed, the necessary information about the research process was given, and the days and lesson hours to be observed were planned together. A voluntary consent form was sent to the parents, and the scale was applied to the children of the parents who completed the consent form. The researcher observed each student in the sample during classroom activities. Observations were made during the following classes: Turkish, Math, Social Studies, Science, Visual Arts, Music, Physical Education and Games, Leisure Activities, Religious Culture and Morals, English, Human Rights and Citizenship, and Life Studies. Each student was observed three times at two-minute intervals, and observation notes were recorded on scale forms for each student. A total of 560 students were observed for a total of 1680 times, and these observations took approximately 16800 minutes during a total of 420 lesson hours.

Data Analysis

The data collected through the scale and personal information form were evaluated with appropriate statistical methods. The data were analyzed using the SPSS 20 package program. Descriptive statistics such as percentages and frequencies were used to evaluate the demographic characteristics of students and teachers. A (K-S) normality test was conducted to determine whether the students' scores from the Leuven Involvement Scale (2010) were normally distributed.

During the data analysis, descriptive statistics such as frequency and percentage were used to evaluate the demographic characteristics of the participants. A (K-S) normality test was conducted to determine whether the students' scores from the Leuven Involvement Scale (2010) were normally distributed. Because the scores were not normally distributed, the Mann-Whitney U test was used in two independent groups and the Kruskal Wallis-H test in more than two independent groups. The level of significance was set at .05, with $p < .05$ indicating a significant difference (Büyüköztürk et al., 2017).

Research Results

The results of the analysis of the student involvement levels are presented in the tables below.

ISSN 1822-7864 (Print) ISSN 2538-7111 (Online) https://doi.org/10.33225/pec/24.82.66

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Table 1
Students' Mean Scores

Grade	*N*	$\bar{x}$	*Md*	*Min.*	*Max.*	*SD*
First	140	3.13	3	1	5	1.162
Second	140	3.06	3	1	5	.950
Third	140	3.12	3	1	5	.804
Fourth	140	3.04	3.0	1	5	.955
Total	560	3.09	3.0	1	5	.976

***N:** Number of students $\bar{x}$**:** Mean *Md*: Median Min.: Minimum Max.: Maximum *SD*: Standard Deviation

As can be inferred from Table 1, first graders have a mean observation score of 3.13, second graders 3.06, third graders 3.12, and fourth graders 3.04. This indicates that all the grades have moderate involvement levels.

Table 2
Mann-Whitney U Test Results by Gender

							Mann-Whitney *U* test		
Gender	*N*	$\bar{x}$	*Md*	*Min.*	*Max.*	*SD*	*Mean Rank*	*U*	*p*
Girl	278	2.99	3	1	5	1.008	796.6		
Boy	282	3.18	3	1	5	.935	883.8	316	.0001
Total	560	3.09	3	1	5	.976			

***N:** Number of students $\bar{x}$**:** Mean *Md*: Median Min.: Minimum Max.: Maximum *SD*: Standard deviation

U: Mann–Whitney *U* statistic

As can be inferred from Table 2, there is a significant difference between male and female students' mean scores: female students have significantly higher involvement levels than male students. On the other hand, both male and female students have moderate involvement levels. Based on these findings, it can be argued that the gender variable is effective in students' involvement levels.

https://doi.org/10.33225/pec/24.82.66 ISSN 1822-7864 (Print) ISSN 2538-7111 (Online)

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Table 3
Kruskal-Wallis H Test Results by Grade

Grade							Kruskal-Wallis *H* test		
	N	$\bar{x}$	*Md*	*Min.*	*Max.*	*SD*	*Mean Rank*	*H*	*p*
First	140	3.13	3	1	5	1.162	855.9		
Second	140	3.06	3	1	5	.950	833.9		
Third	140	3.12	3	1	5	.804	840.2	.739	.864
Fourth	140	3.04	3	1	5	.955	831.9		
Total	560	3.09	3	1	5	.976			

*****N:* Number of students $\bar{x}$*:* Mean *Md*: Median Min.: Minimum Max.: Maximum *SD*: Standard deviation
H: Kruskal-Wallis H statistic

As can be inferred from Table 3, there is not a significant difference among grades in terms of mean scores from the Leuven Involvement Scale. Based on these findings, it can be argued that the grade variable is not effective in student involvement.

Table 4
Kruskal-Wallis H Test Results by Course

Course							Kruskal-Wallis *H* test			
	N	$\bar{x}$	*Md*	*Min.*	*Max.*	*SD*	Mean Rank	*H*	*p*	Paired comparison
Maths	460	3.16	3	1	5	.93	859.7			1-4
										1-6
Turkish	410	2.96	3	1	5	.98	779.9			2-4
Science	140	2.82	3	1	4	.75	674.2			2-6
										2-7
Visual Arts	140	3.48	4	1	5	.92	1037.4			3-1
										3-4
Life Studies	100	2.86	3	1	5	.91	717.9			3-6
Music	100	3.41	4	1	4	.90	1039			3-7
										5-4
Physical Education and Games	100	3.34	4	1	5	1.208	1009.9			5-6
										5-7
								114.2	.0001	9-4
Free Activities	100	3.10	3	1	5	1.078	844			9-6
English	50	2.92	3	1	4	.82	738			9-7
										12-1
Human Rights, Citizenship and Democracy	30	2.97	3	1	4	1.129	830.3			12-4
										12-6
										12-7
Social Studies	30	3.17	3	1	5	.83	851.5			
Religious Culture and Morals	20	2.20	2	1	4	.95	438			
Total	1680	3.09	3	1	5	.97				

*****N*: Number of observations $\bar{x}$*:* Mean *Md*: Median Min.: Minimum Max.: Maximum *SD*: Standard deviation
H: Kruskal-Wallis H statistic

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Since the course type, program, and hours varied in each class, the number of observations also varied. It was found that students had significantly lower involvement levels in Math classes than in Visual Arts and Music classes, and also in Turkish classes than in Visual Arts, Music, and Physical Education and Games classes. On the other hand, students had significantly lower involvement levels in Science classes than in Math, Visual Arts, Music, and Physical Education and Games classes, and also in Life Studies classes than in Visual Arts, Music, and Physical Education and Games classes. Finally, they had significantly lower involvement levels in English classes than in Visual Arts, Music, and Physical Education and Games classes, and also in Religious Culture and Morals classes than in Math, Visual Arts, Music, and Physical Education and Games classes.

Table 5

Kruskal-Wallis H Test Results by Teachers' Professional Experience

Experience							Kruskal-Wallis *H* test			
	N	$\bar{x}$	*Md*	*Min.*	*Max.*	*SD*	Mean Rank	*H*	*p*	Paired comparison
9-15	11	2.94	3	1	5	1.03	773	8.6	.035	1-2 1-3 1-4
16-20	3	3.19	3	1	5	.77	875.4			
21-29	35	3.12	3	1	5	1	853.3			
30-40	7	3.09	3	1	4	.93	850.4			
Total	56	3.09	3	1	5	.98				

**N*: Year of the experience x̄: Mean *Md*: Median Min.: Minimum Max.: Maximum *SD*: Standard deviation

H: Kruskal-Wallis *H* statistic

As can be inferred from the table, there is a significant difference among teachers' professional experience in terms of mean Leuven Involvement Scale scores: it was seen that the students of teachers with experience of 9-15 years had significantly lower involvement levels than those of teachers with experience of 15 years or more. Based on this finding, it can be argued that teachers' professional experience is effective in students' involvement levels.

Discussion

As a result of this research aiming to determine the involvement levels of primary school students in classroom activities, it was determined that students in Turkish primary schools had a moderate level of involvement. This result indicated that primary school students' attention and concentration in classroom activities were limited and their time to continue the given task/activity was limited. Based on this, it can be said that necessary changes should be made in learning environments and processes to improve students' involvement levels, which is an important determinant of academic success (Bierman et al., 2009; Li et al., 2010), an important indicator of the quality of the teaching process and learning objectives (Goldspink & Foster, 2013; Raspa et al., 2001). Similar to this result, Laevers (2017) examined the level of involvement and emotional well-being of primary school students in Belgium and concluded that the level of involvement of students was at a moderate and improvable level. Similarly, Goldspink (2008) stated that involvement was an indicator of the quality of the learning environment, and as the level of involvement increased, the quality of the learning environment would increase, and all these would affect academic achievement. In parallel with this idea, Schnitzler et al. (2020) determined that students with high academic achievement exhibited moderate and high levels of involvement in the classroom.

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In this study, when the involvement levels of students according to gender variable were analyzed, it was determined that female students showed higher involvement in classroom activities than male students. This situation can be explained by the fact that the activities carried out at school appeal to female students who have better interest and motivation towards reading due to their characteristic features, and that the content in which male students can be more active and visual processes are used more frequently are not included (Geist & King, 2008). In this research, this gender difference observed in terms of primary school student's involvement in classroom activities is also observed at different levels of education. Martin (2004) stated that female students' ability to involve in an activity, focus and adaptation skills are higher than male students. In the study conducted by Kayabaşı et al. (2019), it was concluded that female students participated in the lesson more than male students. Similarly, Finn et al. (1991) determined that the involvement of primary school 4th-grade female students was higher than male students in their study. In studies examining the involvement levels of students at different levels of education, it was concluded that female students had higher involvement levels than male students (Baroody & Diamond, 2013; Vansteenkiste et al., 2012). Unlike these results, there are also studies that found that gender variable was not effective in the involvement levels of preschool children (Akyol, 2020; Theodotou, 2015). Examining the level of involvement, which is related to the level at which students realize their potential in terms of gender, cognitive and emotional dimensions, will offer different perspectives.

It was found in this study that there was no significant difference between the students' grade levels and their involvement levels. The result that the involvement levels of the students at all levels of primary school students determined in this research are at a medium level reveals different perspectives in terms of developmental and curriculum development. From a developmental perspective, it is important to evaluate the participation levels of students, which are an indicator of their interests and abilities and show individual differences, both individually and as a group (Laevers & Declercq, 2011). When students use their abilities to the maximum, they make progress in all areas of development. In the study conducted by Skinner et al. (2008), it was determined that there was a significant reduction in students' involvement from kindergarten to the end of high school, including their interest in learning and motivation. More effective learning methods and strategies will be developed and used more frequently in schools, increasing student involvement (Yalçınkaya & Tonbul, 2002). Considering that the level of involvement is an important predictor of academic achievement at later education levels (Schnitzler et al. 2020; Taylor & Nelms, 2006) and an important criterion in preventing school dropout levels (Stichter & Lewis, 2006), it suggests that necessary arrangements should be made to increase the involvement levels of primary school students. It is emphasized that the learning support (Sabol, et al., 2018) that teachers provide to students during student-centered activities that they plan by providing a variety of materials and options (Gülcü & Golezani, 2020; Roskos et al., 2012; Vansteenkiste et al., 2012) is critical in increasing their level of involvement.

In the current study, it was concluded that the involvement levels of primary school students differed according to the course type. It was determined that the involvement levels of the students in Math, Turkish, Science, English, Religious Culture and Moral, Visual Arts, Music, Physical Education and Games courses were lower than the involvement levels in these courses. It is thought that the anxiety levels of the students about these courses and the teacher, the teachers' use of traditional methods in the lessons, the characteristics of the teachers and the fact that they teach the lessons without taking into account the individual differences of the students may have caused low involvement levels in the students. At the same time, it was seen that the level of student involvement in Visual Arts, Music, Physical Education, and Games courses was higher than in other courses. It can be said that the use of more active, student-centered methods in these courses is effective. Similar to this result, Mark (2000) found that

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the involvement levels of students at primary, secondary and high school levels differed in mathematics or social studies courses. In the study conducted by Martiniovic et al., 2011 it was concluded that boys' participation in sports and motivation for physical education were higher than girls in primary school. In the literature, it has been concluded that the interaction with their teachers (Işık & Arslan, 2020), the flipped classroom model (Fulton, 2012; Kaya, 2018; Muir, 2017) and the 5E instructional model (Gülcü & Golezani, 2020) used by teachers, the teaching based on the theory of multiple intelligences in the science and technology course (Atik, 2010) positively affect students' involvement in the lessons, especially in the mathematics course where students have the most difficulties and their involvement levels are low.

All kinds of activities in the classroom constitute the objective of education. While ensuring student involvement in classroom activities, it is necessary to create a positive classroom atmosphere without discouraging them (Künkül, 2008). Classroom activities where students feel more comfortable and successful can ensure a higher level of student engagement. For this reason, it is important for teachers to plan classroom activities by taking into account the characteristics and interests of students in lessons where student involvement is low. Anderson (2016) stated that in project-based learning, students will make choices by experiencing individually, their apathy towards the lesson will decrease, and they will gain motivation. Carrabba and Farmer (2018) concluded in their study that when students are educated in a project-based learning environment, student motivation and involvement increase. Similarly, studies have shown that students studying in constructivist learning environments participate more actively in behavioral, emotional, and cognitive aspects (Kalem & Fer, 2003; Kurt & Bayar, 2020; Zhang, 2008). Davidovitch and Yavich (2023) emphasized the importance of increasing students' involvement and motivation in digital learning environments. In studies evaluating students' involvement in terms of peer relations, it was observed that students had higher levels of involvement in classes where students made their own choices about learning, worked in groups with their friends (Robinson, 2013) and in classes where student interactions were intense (Cappella et al., 2013).

Another result obtained is that teachers' professional experience is effective on the involvement levels of primary school students. The fact that the involvement level of the students in the classes of teachers with more seniority is higher may be due to the experience brought by seniority. It can be thought that the professional experience can positively affect the dimensions such as organization of the learning environment, teacher-student interaction, and teaching methods which are effective on students' involvement. Professional experience improves teachers' awareness of the factors affecting teaching and enables them to integrate theory and practice (Taggart & Wilson, 2005). In the literature, there are studies that concluded that as teachers' seniority increases, their classroom management skills (Dinçer & Akgün, 2015), professionalism (Zembat & *İçli* Küsmüş, 2020), and professional values (Bakioğlu & Koç, 2017) also increase.

It is stated that teacher-student interaction regarding teachers' classroom management skills also affects involvement (Fredricks et al., 2004). There are studies that concluded that there is a relationship between a positive teacher-student relationship and a high involvement level of students (Dotterer & Lowe, 2011) and a negative relationship and a low involvement level (Sabol, Bohlmann, & Downer, 2018). Çelik et al. (2018), as a result of their study, determined that students are more successful in the lessons of the teachers they like, and their behavioral engagement increases as their success increases. Gündüz and *Özarslan* (2017) found that teachers with higher seniority behaved more understanding and mature towards students' adaptation problems. Cıvabaş (2019) found that teachers' leadership, helpful and understanding behaviors increased student engagement, while their ambiguous, admonishing and strict behaviors negatively affected student engagement. *Çobanoğlu* ve Demir (2022) found that educators' justice in classroom management is associated with students' school engagement. It is seen that the results obtained from all these studies support the findings of the current study.

https://doi.org/10.33225/pec/24.82.66 ISSN 1822-7864 (Print) ISSN 2538-7111 (Online)

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Conclusions and Implications

As a result of this research, it was determined that students in the first, second, third and fourth grades of primary schools in Turkey have a moderate level of involvement. It was concluded that there was a significant difference between the involvement levels of primary school students and the gender, course type, and seniority of the teacher, but there was no significant difference between the grade levels of the students.

Based on the results obtained in this study, the following recommendations can be made: To increase the involvement levels of primary school students from medium to high levels, teachers should revise their lesson plans in line with the indicators and dimensions of involvement. Current methods and techniques should be used to increase students' involvement in classroom activities in different courses and arrangements should be made to improve involvement in the learning environment. In-service training can be organized for classroom teachers on observation-based assessment tools for determining students' involvement levels in the classroom. Considering that it is important to determine the involvement levels of primary school students with objective assessment tools, the involvement levels of students can be evaluated comprehensively with different measurement tools such as teacher interview forms and family interview forms developed by the researchers together with the Leuven Involvement Scale. International comparative studies can be planned to examine the involvement levels of primary school students.

The limitations of this research, which aims to determine the involvement levels of primary school students in classroom activities in Turkey, are that it was determined only by the observations made by the researchers. In addition, one of the limitations is the variation in the number of observations due to the differences in the type of courses, hours, and programs at each grade. The addition of teacher evaluations and teacher-student interviews together with observations may provide more generalizable results. In this study, only the behavioral dimension of engagement was addressed. More comprehensive studies can be planned by addressing the cognitive and emotional dimensions of engagement.

Acknowledgements

This research was published as a master's thesis by the first author under the supervision of the second author at Afyon Kocatepe University in 2021. This research is from the project (No 19.SOS.BİL.09) and funded by the Scientific Research Projects Council of Afyon Kocatepe University.

Declaration of Interest

The authors declare no competing interest.

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Received: *September 12, 2023* Revised: *February 09, 2024* Accepted: *February 16, 2024*

Cite as: Erdem, H., & Akyol, T. (2024). Turkish primary school students' involvement in classroom activities. *Problems of Education in the 21st Century*, *82*(1), 66–84. https://doi.org/10.33225/pec/24.82.66

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