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MATH TEACHERS' PERCEPTIONS REGARDING CLASSROOM MANAGEMENT

ABSTRACT

This study examines mathematics teachers' classroom management approaches—democratic, authoritarian, and laissez-faire—working in the Başakşehir district of Istanbul Province. The research was designed using a survey model, and the study sample consisted of 102 mathematics teachers employed in secondary and high schools. Data were collected through a questionnaire comprising two sections and a total of 32 items. The first section included six items related to teachers' personal characteristics, while the second section focused on classroom management approaches. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to analyze the data. In addition, independent samples t-tests were conducted for comparisons between two groups, and one-way analysis of variance (ANOVA) was applied for comparisons involving more than two groups. All statistical analyses were performed using SPSS 20 for Windows. The findings indicate that mathematics teachers predominantly exhibit democratic classroom management behaviors, whereas authoritarian and laissez-faire approaches are observed at moderate levels. The results emphasize the role of democratic classroom management in fostering effective learning environments and enhancing students' active participation in the instructional process.

Keywords: Mathematics Teacher, Classroom Management, Authoritarian, Democratic Approach, Laissez-Faire Approach

1. INTRODUCTION

Classroom management encompasses all practices aimed at balancing the complexity and diversity of classroom environments while designing effective learning settings. It includes the systematic use of principles, concepts, theories, models, and techniques that guide educational activities from planning to implementation in order to achieve instructional objectives. Fundamentally, classroom management is shaped by students' psychological characteristics and individual needs. Therefore, teachers are required to take these needs into careful consideration to ensure the effectiveness of classroom management practices [1].

The use of effective classroom management strategies by teachers facilitates students' active participation in learning activities. A classroom climate in which students can interact with their social environment, freely express their opinions, and perceive all perspectives as valuable can be established through a democratic classroom management approach. When students are educated in schools that adopt democratic classroom management practices, they are more likely to internalize democratic values. Consequently, teachers assume a significant responsibility in fostering the foundations of a democratic society [2].

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2. RESEARCH SIGNIFICANCE

This study contributes to the field of educational management by providing empirical evidence on mathematics teachers' classroom management approaches within a real school context. By examining authoritarian, democratic, and laissez-faire management styles together, the research offers a comprehensive framework for understanding how different classroom leadership orientations are practiced in secondary and high schools. The findings highlight the predominance of democratic classroom management and underline its role in fostering effective learning environments. Moreover, the study informs teacher education programs and professional development policies by identifying gender-related differences in authoritarian practices. Overall, the research offers valuable insights for improving classroom management effectiveness in mathematics education.

Highlights

- Mathematics teachers predominantly adopt democratic classroom management practices.
- Authoritarian and laissez-faire approaches are observed at moderate levels.
- Gender is a significant variable in authoritarian classroom management behaviors.
- Age does not significantly influence classroom management perceptions.
- Democratic classroom management supports active participation and positive classroom climate.

3. THEORETICAL FRAMEWORK OF CLASSROOM MANAGEMENT AND MANAGEMENT STYLES

3.1. Classroom Management

Classrooms function as fundamental subsystems of schools and constitute the primary settings in which educational activities are produced and implemented. In other words, classrooms are the environments where educational objectives are translated into students' learning experiences and observable outcomes. All human and material resources within a school are organized to support the instructional activities carried out in classroom settings [3].

A substantial portion of the learning process takes place within the classroom environment. The classroom represents a unique educational context in which students with similar age characteristics but diverse individual differences come together to achieve predetermined instructional goals. Owing to variations in student characteristics, interactions, and learning conditions, each classroom possesses distinctive features that differentiate it from others. Therefore, every classroom can be regarded as a unique learning environment requiring context-specific management strategies [4].

Effective classroom management is not solely dependent on teachers' individual competencies but is also closely related to institutional support mechanisms. Schools that prioritize professional development can provide various opportunities to enhance teachers' classroom management skills. Such support may include mentoring systems for novice teachers, opportunities for self-assessment through classroom recordings, regular in-service training programs, and the establishment of digital platforms where experienced teachers share instructional materials and daily lesson plans [5].

3.2. Teachers' Understanding of Classroom Management

Teachers' classroom management approaches are largely shaped by their personality traits, professional attitudes, and behavioral



tendencies. These characteristics influence whether teachers adopt student-centered practices that consider learners' needs or apply more rigid, prescriptive, or permissive management styles. Accordingly, teachers may display supportive, motivating, and empathetic behaviors, or alternatively, exhibit intolerant, authoritarian, or indifferent attitudes within the classroom.

In addition to individual teacher characteristics, several contextual factors play a significant role in shaping classroom management practices. Students' characteristics, the scope and content of the course, school culture, and environmental influences all affect how teachers manage their classrooms [6].

According to leadership-oriented management theories in the field of educational administration, teachers' classroom management approaches are commonly categorized as authoritarian (autocratic), democratic, and laissez-faire (indifferent). It is unlikely that teachers consistently adhere to a single classroom management style; rather, their practices can be classified based on the predominance of one of these approaches. Classroom management constitutes a fundamental dimension of the instructional process, as it directly influences the effectiveness of teaching and learning activities.

In the literature, classroom management approaches are addressed through various classification frameworks. In the broadest sense, these approaches are discussed under two main dimensions: traditional and contemporary. More specifically, classroom management practices are frequently examined within three categories—democratic, authoritarian, and indifferent. Teachers' classroom management approaches reflect the degree of consistency in the behaviors they exhibit individually or collectively in classroom settings. These approaches are rooted in teachers' fundamental attitudes and are shaped by contemporary understandings of classroom management as well as the social values and educational trends of their time [7].

3.2.1. Autocratic Class Management Approach

In the authoritarian classroom management approach, roles, responsibilities, and instructional tasks are predetermined and implemented through strict teacher control. Student groups are organized in an authoritarian manner, and students are expected to remain seated throughout the lesson. Punctuality is enforced rigidly, and deviations from established rules are met with little tolerance. Classrooms operating under this approach favor compliant and uncritical students, while opportunities for student-teacher interaction are limited.

In such classrooms, communication is predominantly one-directional, and students are rarely encouraged to express their views or question instructional practices. Rewards and punishments are administered based on the teacher's personal judgment rather than transparent or participatory criteria. During lessons, questioning is largely controlled by the teacher, reinforcing the teacher's dominant position. As a result, this approach may foster authoritarian tendencies among students and encourage passive learning behaviors. A free and open discussion environment is generally absent in authoritarian classrooms, where pressure and control are consistently present. Teachers adopting this approach often rely on threats of punishment or low grades to maintain order, which negatively affects interpersonal relationships within the classroom. Since knowledge transmission is prioritized over students' interests and needs, learners are positioned as passive recipients of information. Authority and power are centralized in the teacher, limiting students' autonomy and critical thinking opportunities.



Although authoritarian teachers are often characterized by determination and decisiveness, their primary weakness lies in their limited capacity to motivate students and foster active engagement in learning processes [8].

3.2.2. Democratic Classroom Management Approach

In the democratic classroom management approach, students and their needs are prioritized over the mere transmission of knowledge. Instruction is organized around learners, integrating students' individual needs with curricular requirements, which together constitute the central focus of the teaching-learning process. Teachers adopting this approach openly demonstrate care, interest, and respect toward their students. Within such a classroom culture, emphasis is placed on positive behaviors and success stories rather than on negative actions or deficiencies.

In the process of achieving instructional goals, encouragement, praise, and guidance replace pressure and threats. Teachers who embrace a democratic management approach position students at the center of learning and remain attentive to their feelings and thoughts. These teachers derive satisfaction from working collaboratively with students and from contributing to their well-being and success [9].

Teachers employing democratic classroom management practices typically greet students upon entering the classroom, wait until full attention is established, and then initiate instruction. When students display inattentive or disruptive behaviors, teachers signal awareness rather than applying immediate sanctions. Classroom rules are established by considering students' opinions, and when inappropriate behaviors occur, teachers emphasize that students are responsible for the consequences of their actions [10].

In democratic classrooms, punitive measures are generally avoided. Instead of imposing penalties such as deprivation, undesirable behaviors are reduced or eliminated through persuasion, explanation, and the presentation of evidence. Failure is not punished; rather, success and effort are reinforced through positive feedback and rewards [11]. Democratic classroom management supports students' healthy personality development and promotes independent thinking and autonomous behavior [12].

3.2.3. Free (Indifferent) Class Management Approach

The laissez-faire (indifferent) classroom management approach is characterized by ambiguity in instructional activities, weak leadership, passivity, and a lack of consistent guidance or support for students. This approach reflects an unstructured management style in which teachers demonstrate limited involvement in classroom processes and insufficient competence in addressing students' academic and behavioral needs [13].

In laissez-faire classrooms, teachers allocate minimal time to students and typically provide guidance only when explicitly requested. Students are granted extensive freedom, which, in the absence of clear rules and boundaries, may lead to the misuse of autonomy. Under such conditions, students may violate classroom rules, display inappropriate behaviors, and develop the perception that they are free to act without limitations. Teachers adopting an indifferent management approach exercise minimal control over students, rarely make demands, and avoid imposing expectations or behavioral standards. In this type of classroom environment, teachers tend to accept students' actions, thoughts, and preferences without critical evaluation and refrain from intervening in the learning process. As a result, the classroom becomes largely unregulated and lacks direction. It has been suggested that such unmanaged settings may cause students to experience confusion,



disengagement, and emotional distress, potentially leading to disorder and chaos within the classroom [14].

Research indicates that students educated in indifferent classroom management environments often exhibit difficulties in impulse control, self-regulation, and the development of social responsibility. These students may struggle to internalize school, classroom, and societal rules, which can negatively affect their interpersonal relationships. Consequently, they may display aggressive behaviors and problematic attitudes. Children raised in such environments are generally characterized by poor rule adherence, weak internal control mechanisms, limited empathy, and inadequate skills in cooperation and sharing [15].

4. METHODS

This section presents detailed information on the research design, study group, data collection instruments, data collection procedures, and data analysis methods employed in the study.

4.1. Model Research

This study adopts a correlational research model, which examines the relationships among variables by analyzing how different factors interact and influence one another across various conditions. The primary aim of the study is to identify mathematics teachers' classroom management approaches. For this purpose, a descriptive survey (screening) model was employed.

In Türkiye, research efforts aimed at portraying the current state of classroom management practices remain limited, and there is a lack of comprehensive data to support explanatory, generalizable, and institutional-level analyses. Therefore, the screening model was selected as the most appropriate research design to describe existing classroom management approaches and to contribute to the literature by providing systematic and empirical evidence.

4.2. Participants

The study was conducted in the Başakşehir district and involved 102 mathematics teachers working in secondary and high schools. Due to the relatively small number of mathematics teachers in the district, the questionnaire was administered to the entire population rather than to a selected sample.

Given that the study employed a descriptive survey (screening) model and aimed to capture diverse perceptions influencing teachers' classroom management practices, no sampling procedure was applied. Instead, a census approach was adopted, whereby all mathematics teachers in the district constituted the research population, ensuring the collection of comprehensive and reliable data.

4.3. Data Collection Tool

In this study, a questionnaire titled Teachers' Understanding of Classroom Management was employed to identify and assess the classroom behaviors exhibited by mathematics teachers. The instrument was adapted from Terzi's (2001) study, *Determining Teachers' Views on Classroom Management Approaches*, and was used to obtain systematic data regarding teachers' classroom management practices. The questionnaire consists of two sections. The first section includes six items related to the demographic characteristics of the participants. The second section comprises 34 items designed to measure the classroom behaviors of secondary and high school mathematics teachers. A five-point Likert-type scale was utilized to evaluate teachers' overall scores across three distinct classroom management approaches. The response options range from always to never and are scored as 5, 4, 3, 2, and 1, respectively.



Items 1-11 assess authoritarian (autocratic) classroom management behaviors, items 12-23 measure democratic classroom management behaviors, and items 24-34 evaluate laissez-faire (indifferent) management behaviors. To examine the reliability of the data collection instrument, Cronbach's alpha coefficient was calculated. The reliability analysis yielded a coefficient of 0.646 for the 34-item scale, indicating an acceptable level of internal consistency in measuring teachers' classroom management attitudes.

4.4. Data Collection

Prior to administering the data collection instrument to mathematics teachers, official permission was obtained through a formal application submitted to the Institute of Social Sciences at Istanbul Aydın University. Following the necessary correspondence between Istanbul Aydın University and the Istanbul Provincial Directorate of National Education, all required approvals were granted.

The questionnaire was distributed to and collected from participating mathematics teachers in person. During the distribution process, official permission documents issued by the Provincial Directorate of National Education were presented to school administrators, and detailed information regarding the purpose of the study as well as the procedures for administering and collecting the questionnaires was provided.

4.5. Data Analysis

In the analysis of the data, frequency and percentage distributions were used to describe mathematics teachers' demographic characteristics and their classroom management approaches. To examine whether significant differences existed between teachers' personal characteristics and their classroom management perceptions, independent samples t-tests were conducted. For comparisons involving more than two groups, one-way analysis of variance (ANOVA) was employed. All statistical analyses were carried out using the SPSS 20 statistical software package.

4.6. Research Questions

- What are mathematics teachers' views regarding the authoritarian (autocratic) classroom management approach?
- What are mathematics teachers' views regarding the democratic classroom management approach?
- What are mathematics teachers' views regarding the laissez-faire (indifferent) classroom management approach?
- Is there a statistically significant difference in teachers' classroom management perceptions with respect to gender and age variables?

5. FINDINGS

5.1. Math Teachers' Views Regarding Autocratic Classroom Management

Math teachers' views regarding autocratic classroom management are provided in Table 1 below.



Table 1. Math teachers' views regarding autocratic classroom management

ITEMS	Always		Usually		Sometimes		Rarely		Never	
	F	%	F	%	F	%	F	%	F	%
1. I lay down classroom rules and principles on my own and expect students to obey them.	13	12.7	61	59.8	25	24.5	1	1	2	2
2. I leave a clear distance between students and me.	21	20.6	52	51	23	22.5	5	4.9	1	1
3. Instruction activities are based on knowledge.	29	28.4	60	58.8	12	11.8	12	11.8	-	-
4. I am the unique source of knowledge for students.	4	3.9	64	62.7	21	20.6	4	3.9	9	8.8
5. In my course, students are either shy or aggressive.	-	-	3	2.9	14	13.7	47	46.1	38	37.3
6. Everything I do in the classroom has a legal base.	38	37.3	55	53.9	6	5.9	2	2	1	1
7. I encourage students to be successful via marks.	6	5.9	17	16.7	58	56.9	15	14.7	6	5.9
8. I punish students' unwanted behaviors.	5	4.9	24	23.5	54	52.9	15	14.7	4	3.9
9. I am disturbed by students' criticisms of me.	3	2.9	1	1	11	10.8	41	40.2	46	45.1
10. I avoid talking about things irrelevant to the course because they hinder the course.	1	1	12	11.8	31	30.4	16	15.7	42	41.2
11. I become strict for students to respect me.	6	5.9	29	28.4	33	32.4	19	18.6	15	14.7

An examination of the table indicates that 12.7% of the mathematics teachers reported that they always determine classroom rules independently, while 59.8% of the respondents stated that they usually establish classroom rules on their own. Approximately one quarter of the participants (24.5% of the respondents) indicated that they sometimes determine the rules independently. In contrast, 1.0% of the respondents reported that they rarely do so, and only 2.0% of the respondents stated that they never determine classroom rules independently.

Regarding interpersonal distance, 20.6% of the mathematics teachers reported that they always maintain a clear distance between themselves and their students, whereas 51.0% of the respondents indicated that they usually do so. Additionally, 22.5% of the respondents stated that they sometimes maintain such distance. A smaller proportion reported that they rarely (4.9% of the respondents) or never (1.0% of the respondents) keep a clear distance from students.

With respect to perceptions of knowledge authority, 3.9% of the participants stated that they always regard themselves as the sole source of knowledge in the classroom, while a majority (62.7% of the respondents) reported that they usually hold this view. Furthermore, 20.6% of the respondents indicated that they sometimes consider themselves the only source of information. In contrast, 3.9% of the respondents reported that they rarely, and 8.8% of the respondents that they never, perceive themselves in this manner.

In addition, 2.9% of the mathematics teachers reported that students in their classes are always shy or aggressive, while 13.7% of the respondents indicated that this occurs sometimes. According to 46.1% of the participants, students are rarely shy or aggressive, whereas 37.3% of the respondents stated that such behaviors never occur during their lessons.

Further findings reveal that 37.3% of the teachers always and 53.9% of the respondents usually base their classroom practices on formal regulations or legal grounds. However, 5.9% of the respondents reported that they sometimes, and 2.0% of the respondents that they rarely, rely on such formal bases. Only 1.0% of the teachers stated that they never ground their classroom actions on legal principles.

In terms of encouraging student success through grades, 5.9% of the teachers reported that they always, 16.7% of the respondents that they usually, and 56.9% of the respondents that they sometimes use grades as a motivational tool. Conversely, 14.7% of the respondents indicated that they rarely and 5.9% of the respondents that they never use grades to encourage student success.

Regarding disciplinary practices, 4.9% of the teachers reported that they always, 23.5% of the respondents that they usually, and 52.9% of the respondents that they sometimes resort to punishment in response to undesirable student behaviors. In contrast, 14.7% of the respondents stated that they rarely, and 3.9% of the respondents that they never, punish students for such behaviors.

Concerning sensitivity to student criticism, only 2.9% of the mathematics teachers reported that they always, and 1.0% of the respondents that they usually, feel disturbed when criticized by students. Meanwhile, 10.8% of the respondents indicated that they sometimes and 40.2% of the respondents that they rarely feel discomfort in such situations. Nearly half of the participants (45.1% of the respondents) stated that they never feel disturbed by student criticism.

With regard to avoiding irrelevant discussions during lessons, 1.0% of the teachers reported that they always, 11.8% of the respondents that they usually, and 30.4% of the respondents that they sometimes avoid discussing topics unrelated to the course content. In contrast, 15.7% of the respondents indicated that they rarely and 41.2% of the respondents that they never engage in such off-topic discussions.

Finally, when asked about adopting strict behavior to gain students' respect, 5.9% of the teachers reported that they always, 28.4% of the respondents that they usually, and 32.4% of the respondents that they sometimes behave authoritatively. However, 18.6% of the respondents stated that they rarely, and 14.7% of the respondents that they never, adopt authoritarian behaviors to be respected by students.

5.2. Math Teachers' Views Regarding Democratic Classroom Management

Math teachers' views regarding democratic classroom management are provided in Table 2 below.

An examination of the table indicates that slightly more than one third of the mathematics teachers (35.3% of the respondents) reported that they always make classroom-related decisions, roles, and task distributions collaboratively with their students. In addition, 52.9% of the participants stated that they usually, and 6.9% of the respondents that they sometimes, cooperate with students in determining classroom decisions, roles, and responsibilities. In contrast, 2.9% of the respondents reported that they rarely, and 2.0% of the respondents that they never, involve students in these processes.

Regarding rule justification, 66.7% of the participants indicated that they always explain the reasons for establishing classroom rules, while 29.4% of the respondents reported that they usually provide such explanations. A smaller proportion stated that they sometimes (2.9% of the respondents) or never (1.0% of the respondents) clarify the reasons underlying classroom rules.



Table 2. Math teachers' views regarding democratic classroom management

ITEMS	Always		Usually		Sometimes		Rarely		Never	
	F	%	F	%	F	%	F	%	F	%
1. I set rules concerning the class, roles and duties together with students.	36	35.3	54	52.9	7	6.9	3	2.9	2	2
2. I explain why the rules in the classroom are laid down.	68	66.7	30	29.4	3	2.9	1	1	–	–
3. In case of unwanted behavior, I explain my feelings without blaming students.	34	33.3	50	49	16	15.7	1	1	1	1
4. I speak mildly and without yelling in the class.	6	5.9	63	61.8	31	30.4	2	2	–	–
5. I evaluate the exams objectively.	62	60.8	36	35.3	4	3.9				
6. In instruction, I give priority to students' interests and needs.	39	38.2	61	59.8	2	2	–	–	–	–
7. I use teaching methods that allow students' participation.	33	32.4	64	62.7	5	4.9	–	–	–	–
8. I ensure a versatile communication between students and myself and among students.	46	45.1	51	50	4	3.9	1	1	–	–
9. In my class, I care about democratic life culture.	45	44.1	56	54.9	1	1	–	–	–	–
10. I provide students with options instead of restrictions.	31	30.4	60	58.8	11	10.8	–	–	–	–
11. I give priority to group works.	31	30.4	57	55.9	14	13.7				

Concerning the item stating "I explain my feelings without blaming students in cases of undesirable behavior," one third of the mathematics teachers (33.3% of the respondents) reported that they always adopt this practice, while 49.0% of the respondents indicated that they usually do so. Furthermore, 15.7% of the respondents reported that they sometimes, whereas only 1.0% of the respondents reported that they rarely or never, express their feelings without blaming students.

In addition, 5.9% of the teachers stated that they always, 61.8% of the respondents that they usually, 30.4% of the respondents that they sometimes, and 2.0% of the respondents that they rarely speak in a calm and moderate tone in the classroom.

With respect to assessment practices, 60.8% of the participants reported that they always evaluate examinations objectively, while 35.3% of the respondents stated that they usually do so. Only 3.9% of the respondents indicated that they sometimes evaluate examinations objectively.

Regarding prioritizing students' interests and needs, 38.2% of the teachers reported that they always, 59.8% of the respondents that they usually, and 2.0% of the respondents that they sometimes give precedence to students' interests and needs.

The findings also reveal that 32.4% of the participants always, 62.7% of the respondents usually, and 4.9% of the respondents sometimes employ instructional methods that promote active student participation.

According to Table 2, 45.1% of the mathematics teachers stated that they always, and 50.0% of the respondents that they usually, ensure multidirectional communication between themselves and students as well as among students. Additionally, 3.9% of the respondents reported that they sometimes, while only 1.0% of the respondents indicated that they never, facilitate such communication.

When teachers' respect for democratic life culture was examined, the findings showed that 44.1% of the participants always, 54.9% of the

respondents usually, and only 1.0% of the respondents sometimes demonstrate respect for democratic values.

Furthermore, 30.4% of the mathematics teachers reported that they always, and 58.8% of the respondents that they usually, provide students with alternative options rather than absolute choices, while 10.8% of the respondents stated that they sometimes do so.

Finally, the findings indicate that 30.4% of the participants always, 55.9% of the respondents usually, and 13.7% of the respondents sometimes prioritize group work activities in their classrooms.

5.3. Math Teachers' Views Regarding Indifferent Classroom Management

Math teachers' views regarding indifferent classroom management are provided in Table 3 below.

Table 3. Math teachers' views regarding indifferent classroom management

ITEMS	Always		Usually		Sometimes		Rarely		Never	
	F	%	F	%	F	%	F	%	F	%
1. I aid students only when they want.	9	8.8	19	18.6	49	48	14	13.7	11	10.8
2. In classroom management, I meet unmanageable problems.	2	2	6	5.9	28	27.5	36	35.3	30	29.4
3. I regard planning instruction activities as time loss.	–	–	8	7.8	37	36.3	20	19.6	37	36.3
4. Activities such as private course and trade outside school more interest me.	–	–	8	7.8	24	23.5	24	23.5	46	45.1
5. While evaluating students, I behave as per my psychology that day.	–	–	4	3.9	17	16.7	22	21.6	59	57.8
6. Objects of school and course does not impact the way I teach.	1	1	49	48	21	20.6	16	15.7	15	14.7
7. My students are free in the class as much as possible.	2	2	25	24.5	45	44.1	22	21.6	8	7.8
8. My students show behaviors adopted by society.	12	11.8	52	51	29	28.4	5	4.9	4	3.9
9. I am an inaccessible person before students.	1	1	21	20.6	44	43.1	12	11.8	24	23.5
10. I avoid playing the role of teacher and administrator in the class.	2	2	30	29.4	48	47.1	15	14.7	7	6.9

The analysis of the data indicates that 8.8% of the participants reported that they always provide assistance to students only when help is explicitly requested. In addition, 18.6% of the mathematics teachers stated that they usually, 48.0% of the respondents that they sometimes, 13.7% of the respondents that they rarely, and 10.8% of the respondents that they never offer assistance solely upon student demand.

Regarding classroom management difficulties, 2.0% of the teachers reported that they always and 5.9% of the respondents that they usually encounter unmanageable situations in classroom management. Furthermore, 27.5% of the participants stated that they sometimes face such difficulties. However, more than one third of the teachers (35.3% of the respondents) reported that they rarely, and 29.4% of the respondents that they never, experience unmanageable classroom management problems.

With respect to instructional planning, 7.8% of the mathematics teachers reported that they usually and 36.3% of the respondents that

they sometimes perceive planning educational activities as a waste of time. In contrast, 19.6% of the respondents indicated that they rarely, and 36.3% of the respondents that they never, regard instructional planning in this manner.

The findings also reveal that 7.8% of the teachers reported that they usually, 23.5% of the respondents that they sometimes, and 23.5% of the respondents that they rarely show interest in activities such as private tutoring or commercial work outside school. However, nearly half of the participants (45.1% of the respondents) stated that they never engage in such activities.

Regarding behavioral consistency, 3.9% of the mathematics teachers reported that they usually, 16.7% of the respondents that they sometimes, and 21.6% of the respondents that they rarely shape their classroom behaviors based on their daily psychological state. In contrast, 57.8% of the participants stated that they never adjust their behaviors according to their daily mood.

When examining the influence of instructional goals, only 1.0% of the participants reported that they are always, 48.0% of the respondents that they are usually, and 20.6% of the respondents that they are sometimes influenced by general instructional objectives during teaching. However, 14.7% of the teachers indicated that course and school objectives never influence their instructional practices.

In terms of granting students complete freedom in the classroom, 2.0% of the teachers reported that they always, and 24.5% of the respondents that they usually, allow full autonomy. Additionally, 44.1% of the respondents stated that they sometimes, and 21.6% of the respondents that they rarely, provide complete freedom, while 7.8% of the respondents reported that they never allow such autonomy.

Regarding students' alignment with societal norms, 11.8% of the teachers reported that their students always, and 51.0% of the respondents that they usually, display behaviors accepted by society. Furthermore, 28.4% of the respondents indicated that students sometimes, while 4.9% of the respondents reported that they rarely, and 3.9% of the respondents that they never, demonstrate such behaviors.

Concerning teacher accessibility, 1.0% of the participants stated that they always, 20.6% of the respondents that they usually, and 43.1% of the respondents that they sometimes perceive themselves as inaccessible to students. In contrast, 11.8% of the respondents reported that they rarely, and 23.5% of the respondents that they never, consider themselves inaccessible.

Finally, when teachers' avoidance of assuming instructional and managerial roles in the classroom was examined, 2.0% of the teachers reported that they always, 29.4% of the respondents that they usually, 47.1% of the respondents that they sometimes, and 14.7% of the respondents that they rarely avoid fulfilling the role of teacher and classroom manager. However, 6.9% of the participants stated that they never avoid assuming these roles.

5.4. Opinions and Personal Characteristics of Math Teachers about Classroom Management Approach

The second objective of the study is to examine whether mathematics teachers' classroom management perceptions differ according to gender and age variables.

5.4.1. Opinions of Math Teachers about Classroom Management Approach According to Gender

This section examines whether mathematics teachers' classroom management approaches—authoritarian, democratic, and laissez-faire—differ according to gender. Independent samples t-test results, along

with arithmetic means and standard deviations, were calculated to compare teachers' perceptions of these classroom management approaches by gender. The t-test statistics, mean scores, and standard deviation values related to authoritarian, democratic, and laissez-faire classroom management approaches according to gender are presented in Table 4.

Table 4. Independent samples t-test results, arithmetic means, and standard deviations of mathematics teachers' classroom management approaches by gender.

Table 4. Means and standard deviations concerning classroom management perceptions in terms of gender

Class Management Approach	Number of participants (N)	Arithmetic mean (M)	Standard deviation (SD)	"t" value (t)	Significance Level (p)
Autocratic					
Female	55	32.63	4.74	2.09	0.039
Male	47	30.53	5.42		
Democratic					
Female	55	18.56	3.19	1.28	0.203
Male	47	19.48	4.09		
Indifference					
Female	55	31.16	4.74	0.67	0.500
Male	47	30.48	5.31		

According to Table 4, female mathematics teachers obtained slightly higher mean scores (Female = 32.63; Male = 30.53) than male teachers with respect to the adoption of the authoritarian classroom management approach. In contrast, male mathematics teachers demonstrated higher mean scores in the democratic classroom management approach (Male = 19.48; Female = 18.56). Regarding the laissez-faire (indifferent) classroom management approach, female teachers' mean score was 31.16, whereas the mean score of male teachers was 30.48. To determine whether these observed differences between female and male teachers were statistically significant, independent samples t-tests were conducted. The results of the t-test indicated that the difference in democratic classroom management approaches between female and male teachers was not statistically significant ($p = 0.203 > 0.05$). Therefore, the null hypothesis stating that female and male teachers do not differ significantly in their understanding of democratic classroom management was accepted. Similarly, the results revealed no statistically significant difference between female and male teachers in terms of the laissez-faire classroom management approach ($p > 0.05$). Accordingly, the null hypothesis asserting that teachers' perceptions of the indifferent classroom management approach do not differ by gender was accepted. However, the findings demonstrated a statistically significant difference between female and male teachers with respect to the authoritarian classroom management approach ($p = 0.039 < 0.05$). This result indicates that gender is a significant variable in explaining differences in teachers' authoritarian classroom management behaviors. In summary, while gender did not significantly influence teachers' democratic and laissez-faire classroom management approaches, it was found to be a significant factor in the adoption of authoritarian classroom management behaviors.

5.4.2. Math Teachers' Opinions on the Classroom Management Approaches According to Age

Table 5 presents the arithmetic mean and standard deviation values of mathematics teachers' authoritarian, democratic, and laissez-faire classroom management approaches according to age groups. With respect to the authoritarian classroom management approach, the mean scores were 30.77 for teachers aged 30 years and younger, 31.55 for those aged



between 31 and 40 years, and 33.51 for teachers aged 41 years and above. These findings indicate that mathematics teachers aged 41 years and above exhibited the highest mean scores for the authoritarian classroom management approach, whereas teachers aged 30 years and younger demonstrated the lowest mean scores.

Table 5. Math Teachers' Mean and Standard Deviation values about classroom management according to age

Age group	Number (N)	Arithmetic value (M)	Standard deviation (SD)
Autocratic classroom management approach			
30 and younger	35	30.77	4.97
31-40 aged	45	31.55	5.18
41 and above aged	22	33.31	5.20
Democratic classroom management approach			
30 and younger	35	18.71	3.13
31-40 aged	45	18.71	3.44
41 and above aged	22	20	4.65
Uninterested classroom management approach			
30 and younger	35	29.82	5.23
31-40 aged	45	31.53	4.48
41 and above	22	31.09	5.57

As shown in Table 5, the arithmetic mean scores for the democratic classroom management approach were 18.71 for mathematics teachers aged 30 years and younger, 18.71 for those aged between 31 and 40 years, and 20.00 for teachers aged 41 years and above. With regard to the laissez-faire (indifferent) classroom management approach, the mean scores were 29.82 for teachers aged 30 years and younger, 31.53 for teachers aged between 31 and 40 years, and 31.09 for teachers aged 41 years and above. These findings indicate that mathematics teachers aged 31-40 demonstrated the highest mean scores for the laissez-faire classroom management approach, whereas teachers aged 30 years and younger exhibited the lowest mean scores. To statistically examine whether these differences in mathematics teachers' perceptions of authoritarian, democratic, and laissez-faire classroom management approaches were significant across age groups, a one-way analysis of variance (ANOVA) was conducted. The results of the ANOVA are presented in Table 6.

Table 6. Results of One-Way Analysis of Variance on math teachers' understanding classroom management views according to age group

Autocratic Classroom Approach	Sum of Squares (SS)	Level of Variable (LV)	Mean Square (MS)	F value (f)	Significance Level (p)
Between Groups	88.611	2	44.306	1.692	0.189
Within Groups	2592.055	99	26.182		
Sum	2680.666	101			
Democratic Classroom Approach	Sum of Squares (SS)	Level of variable (LV)	Mean Square (MS)	F value (f)	Significance Level (p)
Between Groups	28.603	2	14.301	1.077	0.345
Within Groups	1314.387	99	13.277		
Sum	1342.990	101			
Uninterested Classroom Approach	Sum of Squares (SS)	Level of variable (LV)	Mean Square (MS)	F value (f)	Significance Level (p)
Between Groups	58.805	2	29.402	1.179	0.312
Within Groups	2467.990	99	24.929		
Sum	2526.795	101			

According to the results presented in Table 6, the p-value obtained from the one-way analysis of variance (ANOVA) conducted to examine differences in mathematics teachers' authoritarian classroom management approaches across age groups was 0.189, which is greater than the

significance level of 0.05 ($p > 0.05$). Therefore, the null hypothesis (H_0 : The mean scores of the age groups are equal) was accepted. This finding indicates that mathematics teachers' authoritarian classroom management approaches do not differ significantly according to age. Similarly, the ANOVA results for the laissez-faire (indifferent) classroom management approach yielded a p-value of 0.1312, which also exceeds the 0.05 significance level ($p > 0.05$). Accordingly, the null hypothesis (H_0 : The mean scores of the age groups are equal) was accepted. This result demonstrates that mathematics teachers' laissez-faire classroom management approaches do not vary significantly with respect to age. Overall, the findings suggest that age is not a statistically significant factor influencing mathematics teachers' classroom management approaches in terms of authoritarian, democratic, or laissez-faire orientations.

6. CONCLUSION

With regard to perceptions reflecting the authoritarian classroom management approach, the findings indicate that mathematics teachers tend to use grades as a means of encouraging student achievement and frequently perceive themselves as the primary source of knowledge in the classroom. Participants also reported a tendency to determine classroom rules independently and to maintain a clear professional distance from their students. In addition, teachers emphasized that their instructional practices are predominantly knowledge-oriented and that their classroom actions are largely grounded in formal regulations and legal frameworks. Despite these authoritarian tendencies, the participants did not report that students in their classes exhibit predominantly shy or aggressive behaviors. Moreover, mathematics teachers indicated that they do not feel disturbed by criticism from students and are not inclined to resort to punishment in response to undesirable behaviors. They also reported that they do not adopt authoritarian behaviors solely to gain students' respect. In terms of democratic classroom management perceptions, the findings demonstrate that mathematics teachers generally collaborate with students when determining classroom roles and responsibilities. Teachers reported that they typically communicate with students in a calm and respectful manner and prioritize students' needs and interests. Furthermore, they frequently employ instructional methods that encourage active student participation, establish multidirectional communication within the classroom, and demonstrate respect for democratic values. Teachers also reported that they usually offer students alternative options rather than imposing rigid restrictions, consistently evaluate examinations objectively, and clearly explain the rationale underlying classroom rules. The results further revealed a statistically significant difference between mathematics teachers' perceptions of authoritarian classroom management according to gender. Specifically, male and female teachers differed in their adoption of authoritarian classroom management behaviors. However, no significant gender-based differences were identified in teachers' democratic or laissez-faire classroom management perceptions. Additionally, the findings indicated that mathematics teachers' classroom management perceptions did not differ significantly according to age. Teachers across all age groups exhibited similar perceptions regarding authoritarian, democratic, and laissez-faire classroom management approaches. Although an increase in age was associated with a slight, non-significant increase in authoritarian classroom management perceptions, no statistically significant differences were observed at the 0.05 significance level in relation to democratic or laissez-faire classroom management approaches.

7. RECOMMENDATIONS

Future studies may extend the scope of this research by implementing similar investigations across different regions of Türkiye, which would enable the generation of more comprehensive and generalizable findings regarding mathematics teachers' classroom management perceptions. Such nationwide studies could contribute to a deeper understanding of contextual and institutional factors influencing classroom management practices. In addition, higher education institutions responsible for training mathematics teachers should place greater emphasis on classroom management courses within their curricula. These courses should be designed to integrate both theoretical foundations and practical applications in order to better prepare prospective teachers for real classroom environments. Furthermore, professional development seminars focusing on effective classroom management practices should be regularly organized for in-service mathematics teachers. Supporting teachers through activities aimed at reducing occupational stress and fatigue may also enhance their classroom management effectiveness. Finally, periodic in-service training programs on classroom management should be provided to ensure continuous professional growth and the adoption of contemporary management approaches.

CONFLICT OF INTEREST

The author declare that they have no potential conflict of interest.

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DECLARATION OF ETHICAL STANDARDS

The author of the article declare that the materials and methods used did not require ethics committee approval and/or regulatory approval.

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