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Examinarea percepţiilor elevilor de şcoală primară cu privire la climatul clasei utilizând chestionarul privind climatul clasei şi desenele copiilor

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EXAMINING PRIMARY SCHOOL PUPILS' PERCEPTIONS OF CLASSROOM CLIMATE USING THE CLASSROOM CLIMATE QUESTIONNAIRE AND CHILDREN'S DRAWINGS

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Abstract

Centering students' voices in primary school settings has gained increased importance in recent years with the rise in the significance of children's rights. Existing studies investigated students' classroom climate perceptions via a qualitative (e.g., interviews or classroom observations) or a quantitative approach (e.g., self-reported questionnaires). However, in the case of international and national literature, a study discriminating the perspective differences produced by each approach to classroom climate is still lacking. Hence, following a mixed-method approach, our endeavour aims to fill this gap. In total, 68 fourth-grade primary school students from Romania (28 girls and 40 boys, aged 9-12 years old) answered the golden standard instrument in the field (i.e., Classroom Climate Questionnaire Primary – CCQ-P). Complementary, all the students made free-hand drawings of their classroom (i.e., the approach adopted following that of Kuzle and Gracin, 2021), which they further explained to the first author in a semi-structured interview.

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We noticed both similarities and differences in how the two approaches revealed different aspects of children's perspectives on classroom climate. In general, research participants understood their classroom climate in positive terms, a point shared across methodological approaches. Moreover, task orientation seemed to be the most pronounced dimension across approaches, since related CCQ-P scores were high, and students represented themselves as paying attention and working on specific tasks. However, regarding collaboration and involvement, whereas the CCQ-P revealed relatively high levels, drawings of children collaborating or actively engaging in communication with the teachers and other students were extremely rare, and the frontal organization of the teaching process dominated the sample. The current paper can contribute to a better understanding of the integration of qualitative and quantitative approaches to classroom climate and consequentially to a more nuanced understanding of the minutiae of classroom climate in Romania and beyond.

Keywords: child friendly research, classroom climate, drawing as a research method, primary school, students' perspectives.

Rezumat

În ultimii ani, luarea în considerare a vocii elevilor în ceea ce priveşte mediul şcolar în învăţământul primar a primit tot mai multă însemnătate, pe fondul creşterii interesului pentru drepturile copiilor. Studiile existente au investigat percepţiile elevilor asupra climatului din clasă folosind abordări calitative (de exemplu, interviuri sau observaţii în clasă) sau abordări cantitative (de exemplu, chestionare autoadministrate). Totuşi, în literatura naţională şi internaţională, lipseşte un studiu care să discrimineze diferenţele de perspectivă produse de fiecare abordare asupra climatului din sala de clasă. Prin urmare, urmând o abordare mixtă, demersul nostru îşi propune să umple acest gol. În total, 68 de elevi de clasa a IV-a din România (28 de fete şi 40 de băieţi, cu vârste între 9 şi 12 ani) au completat instrumentul de referinţă în domeniu (Chestionarul climatului din sala de clasă pentru învăţământ primar; CCQ-P). Complementar, toţi elevii au realizat individual desene ale clasei lor (abordare adoptată după cea a lui Kuzle şi Gracin, 2021), pe care le-au explicat ulterior primului autor într-un interviu semi-structurat. Am observat atât similitudini, cât şi diferenţe în modul în care cele două abordări au relevat aspecte diferite ale perspectivelor elevilor asupra climatului clasei. În general, participanţii la cercetare au înţeles climatul clasei lor în termeni pozitivi, acest aspect fiind comun între cele două abordări metodologice. În plus, orientarea către sarcină a părut să fie dimensiunea cea mai pronunată în ambele abordări, deoarece scorurile CCQ-P aferente au fost ridicate, iar elevii s-au reprezentat pe ei înşişi ca fiind atenţi şi lucrând la sarcini

specifice. Totuşi, în ceea ce priveşte colaborarea şi implicarea, deşi CCQ-P a relevat niveluri relativ ridicate, desenele copiilor în care aceştia colaborau sau se angajau activ în comunicare cu profesorii şi alţi elevi au fost extrem de rare, iar organizarea frontală a procesului de predare a dominat eşantionul. Lucrarea de faţă poate contribui la o mai bună înţelegere a integrării abordărilor calitative şi cantitative asupra climatului clasei şi, în consecinţă, la o înţelegere mai nuanţată a detaliilor climatului de la clasă în România.

Cuvinte-cheie: *cercetare prietenoasă pentru copii, ciclul primar, climat din sala de clasă, desenul ca metodă de cercetare, perspectivele elevilor.*

1. Introduction

The UN Convention on the Rights of the Child (UNCRC, 1989) provided an international legal framework for securing the right of children to express their views and be heard in any matter of concern to them (Article 12). Researchers (Lawrence et al., 2015; Lundy, 2007; Ward & Lundy, 2024) have argued for the need to develop child-friendly methods in order to respect this right, pointing to the fact that merely 'giving' pupils 'voice' is not a sufficiently adequate approach to guaranteeing children's rights in educational settings (Lundy, 2007). Child-friendly research methods involve using qualitative methodology in such a way as to not create barriers for children's participation in the research process, e.g. through an overtly narrow focus on linguistic abilities and abstract concepts and using methods to elicit their views that appear familiar to them, such as drawings (Nedelcu, 2013).

Complementarily, the new sociology of childhood (Alanen et al., 2018; Epstein et al., 2006; Holloway & Valentine, 2000; James et al., 1998) has long underlined the need to understand children as competent agents of their everyday life and as experts of their experiences. Drawings followed by interviews have been used in Romania and beyond to understand children's perspectives on their everyday school life (Nedelcu, 2013; Ulrich, 2008; Ulrich & Van der Veelde, 2010). Ulrich (2008) has shown how representations of the school and classroom seem to be focused on material spatial elements, whereas interactions are rarely present in children's drawings and are represented to take place outside classrooms (e.g., in the yard while playing football) or are centered on primary school teachers inside classrooms.

Complementarily, Nedelcu (2013) also highlighted how the experience of students with traditional didactic methods is visible in the ways in which they draw images of their classroom. Both authors agree that drawings are suitable methods for eliciting children's views of their school and classroom environments (Nedelcu, 2013; Ulrich, 2008).

Aspects such as how the participatory context for voice is facilitated and how children's expressions of voice are heard are essential components of respecting children's rights (European Commission, n.n.; Henderson-Dekort et al., 2023; Shier, 2001). Moreover, despite the decades that have passed since the elaboration of the convention, methodologies for successfully involving children in expressing their views beyond participatory research settings is still lacking operational clarity (Falch-Eriksen et al., 2021). Furthermore, whereas child-friendly research methods are built on a postmodern epistemology this is not always viewed as legitimate in relation to scientific knowledge production for educational research that generally centers a positivist epistemology (Hatch, 2007).

Our article seeks to contribute to this ongoing debate by contrasting two methods that facilitate the expression of children's views on the classroom climate they are experiencing that could help both researchers and primary school teachers to understand classroom climate from the perspective of students. As we recognize that these views also need to be heard by teachers for the voice of children to be heard, we think that this study could be of interest to teachers working in primary schools to help them find ways in eliciting students' views on their classroom. Looking at the classroom from children's perspectives through drawings followed by interviews, as well as an adapted questionnaire allows us to bridge different approaches that are not commonly addressed together: the new sociology of childhood and a psychometric approach to understanding classroom climate. Moreover, our exploration shows how both explicitly child-friendly research methods and a questionnaire adapted for use with children in primary school settings produce complementary knowledge.

The classroom plays a crucial role in the life of any child, as it often continues throughout the primary and secondary school cycle and has a significant influence on its members (Cucoş, 2009). The well-being of students within

the class can be influenced by psychosocial factors, such as good social relationships among class members. In education, research on psychosocial factors focuses on concepts such as the learning environment. According to Fraser's vision (2002), when referring to the learning environment, we can distinguish between its approach at the school level or the classroom level. At the classroom level, the term learning environment is equivalent to classroom climate (Cimpian et al., 2021).

1.1. Classroom climate

The classroom climate refers to a grouping of interacting factors aimed at generating and promoting learning. Thus, each educational context is unique due to the multitude of factors that impact the classroom climate. Schmuck and Schmuck (1978) define the classroom climate as the entirety of group processes that occur during student-student and teacher-student interactions. These include both interpersonal relationships and the teacher's expectations of the students and their attitudes, the teacher's control over the class, aspects related to teaching style and organization of the group, etc.

Thus, the classroom climate becomes a mediator between these variables, being formed and shaped through interactions between students and interactions between teachers and students. A major factor, alongside these interactions, is their quality, which in turn influences the student's learning process and their satisfaction. Tobin and Fraser (1991) argue that this climate affects students' behavior, knowledge level, and motivation, as well as their attitudes towards certain subjects, the class, school, or education in general. Since the classroom climate is the type of environment created for students by the school and teachers, teachers constantly seek to create a positive climate where learning is enhanced and maximized. This leads to the creation of an environment where students feel intellectually stimulated, respected, and safe. This positive climate will allow students to fulfill both their basic physical and mental health needs and their educational needs (Falsario et al., 2014). Thus, Cucoş (2009) states that "often, the efficiency of teaching activity is closely related to the so-called 'educational climate', represented by the development of appropriate relationships, both among the students of a class and between them and the teacher" (p. 549), which reinforces the

creation and maintenance of a positive classroom climate. Conversely, a negative classroom climate is considered one where students are uncomfortable physically, emotionally, or academically (Falsario et al., 2014).

Recently, scholars in the field of education have moved away from studying characteristics of individual students that may lead to school failure and lack of adaptability and have focused instead on evaluating the context in which learning takes place (Anderson et al., 2004). This had led to an increase in the number of studies on classroom climate. Ševkušić et al. (2014) identify four dimensions of classroom climate: equality in communication, social relationships between students, respect for students' feelings and organizing group work. These dimensions operationalize an ecological understanding that centers the role of the environment in human development. In this tradition, Ryan and Deci (2000) emphasize the importance of creating a positive classroom climate where children feel respected, cared for and supported. Indeed, the classroom climate is a complex, multidimensional construct, as evidenced by the multitude of conceptualizations proposed by researchers. However, there are two main aspects of the classroom climate, namely: the physical environment and the social environment.

1.1.1. *Physical environment*

The physical environment refers to all the elements and objects present in the classroom, such as chairs, tables, furniture, lighting fixtures, or various decorative elements (Valero-Valenzuela et al., 2020). This environment plays a crucial role in shaping pupils' learning experiences. A well-organized classroom can foster a positive atmosphere that enhances students' motivation and well-being.

1.1.2. *Social environment*

Social environment, on the other hand, refers to the teacher's leadership style and the students' involvement and participation. Additionally, within the classroom's social environment, various interactions between present members can be observed, along with their perceptions of it. Thus, the term

classroom social climate refers to how teachers and students perceive the quality of their experiences in the classroom. How they feel will ultimately determine their behavior within this environment (Valero-Valenzuela et al., 2020).

1.2. Students' Perceptions of Classroom Climate

Students' perceptions of classroom climate differ significantly from one student to another, as well as among students within the same class (Bru et al., 2002). One explanation for this phenomenon is the individual characteristics of students, which cause different students to interpret identical situations in different ways. If this process is the primary cause of the observed differences between individual reports on classroom climate, then these reports would have reduced validity as measures of these climates. Despite this, there is a possibility that students in the same class are exposed to different learning environments. One reason might be that teachers treat students in the class differently. Therefore, these individual perceptions may reflect, to some extent, both the social structure of the classroom and the motivational climate in the class (Stornes et al., 2008). Despite these differences in individual students' perceptions, there is also a certain common understanding regarding the classroom learning environment (Ryan & Patrick, 2001).

Students' perceptions of their classroom are generally based on their own knowledge and are a result of prolonged exposure to that environment. Using students' perceptions of the classroom environment naturally extends the student mediation paradigm. According to this paradigm, students' own perceptions of their learning context can influence their subsequent academic achievements (Rowe et al., 2010). Additionally, research conducted by Radovan and Makovec (2015) confirmed assumptions that perceptions of classroom climate play an important role in student motivation.

Whereas both qualitative sociological studies conducted with child-friendly methods and age-appropriate questionnaire based psychological research on classroom environments have contributed to a better understanding of students' perceptions of their classroom climate, how the findings produced

with one approach relate to the other has not been explored. In the present study we want to show how results produced in the two traditions relate to one another and which aspects of classroom climate they help reveal.

2. Research methodology

2.1. Research objective

This study is structured following the research objective: To compare how two different research approaches (CCQ-P based questionnaire research and drawings followed by semi-structure interviews) differ in enabling researchers to understand student perspectives on classroom climate.

2.2. Participants

The target population for this study consists of primary school students in the fourth grade. The study sample consisted of 68 primary school students, aged 9 to 12 years (from three fourth-grade classes), with a mean age of 10.50 years (SD = 0.58), all attending a single educational institution in Timiş County, Romania. The initial requested population consisted of 80 students, but following the completion of informed consent forms, only 68 students decided to participate in this study. Of the 68 students, 40 were boys and 28 were girls.

The research was conducted between 2023 and 2024 in a rural school located near Timişoara. This institution was selected based on convenience, namely due to the willingness of a teacher to facilitate the classes participation in the study. The students involved did not come from disadvantaged backgrounds, and academically, the sample included both high-achieving students and those with lower performance levels.

2.3. Research Procedure

The research involved informing teachers and obtaining consent from students' legal guardians. Data collection was mixed, including a paper

questionnaire, student drawings, and semi-structured interviews. Questionnaires were completed in class, under the condition that teachers were absent, to avoid influencing responses. Drawings were done during Visual Arts class, and interviews followed to gain deeper insights into the drawings.

The following instruments were used to collect the necessary data for the research: the Classroom Climate Questionnaire Primary (CCQ-P) and a drawing with a given theme, accompanied by a semi-structured conversational interview. CCQ-P was developed and validated by Aldridge and Galos (2018) for primary education and was later translated and validated for the Romanian population at the following pre-university education levels: primary, secondary, and high school (Cimpian et al., 2021).

Given the complexity of the classroom climate variable, it is necessary to measure it from both quantitative and qualitative paradigms to obtain a clearer vision of it. Thus, we used the CCQ-P, followed by the task in which students individually drew their classroom climate. After creating the drawings, a semi-structured conversational interview was conducted, in which students described their drawings in depth based on the interview questions, following the approach established by Kuzle and Gracin (2021).

2.3.1. *Classroom Climate Questionnaire Primary (CCQ-P)*

To determine students' perceptions of the classroom climate, we used the Classroom Climate Questionnaire Primary (Aldridge and Galos, 2018 and translated and validated for the Romanian population - Cimpian et al., 2021), consisting of 45 items related to the learning environment. Students' responses were recorded by coloring the rectangle with the number corresponding to their opinion, on a Likert scale: 1 - Almost Never, 2 - Rarely, 3 - Sometimes, 4 - Often, and 5 - Almost Always. The questionnaire includes nine dimensions of the classroom learning environment, each represented by five items: student cohesiveness ("I get on well with students in this class."), teacher support ("The teacher helps me with my work."), equity ("I get as much say as other students."), responsibility for learning ("I am expected to work independently."), clarity of instructions ("I know what I need to do to complete

my school work."), involvement ("I discuss ideas in class."), task orientation ("Getting my work done is important to me."), personal relevance ("I use what I learn in my everyday life.") and cooperation ("We work in groups (or pairs) in this class.").

In this study, the Cronbach's alpha coefficient shows high values for eight of the nine dimensions of the CCQ-P questionnaire: $\alpha = 0.818$ for the student cohesiveness dimension; $\alpha = 0.690$ for the teacher support dimension; $\alpha = 0.703$ for the equity dimension; $\alpha = 0.778$ for the responsibility for learning dimension; $\alpha = 0.745$ for the clarity of instructions dimension; $\alpha = 0.672$ for the involvement dimension; $\alpha = 0.787$ for the personal relevance dimension; and $\alpha = 0.775$ for the cooperation dimension.

To maintain high internal consistency across all dimensions of the questionnaire, it was necessary to remove one item from the task orientation dimension ('I work hard even if I don't like what I'm doing'). This adjustment increased the Cronbach's alpha value for the task orientation dimension from $\alpha = 0.572$ to $\alpha = 0.674$, in line with practices found in another research (Baethge et al., 2019).

2.3.2. *Drawings created by pupils*

The qualitative part of the research was divided into two stages: reviewing the students' drawings and conducting a semi-structured conversational interview, adapted from Kuzle & Gracin (2021).

For the drawing task, each student was given a piece of paper with the following instruction: "Dear …, I am Ana and I will be your new classmate. I would love to get to know your classroom better. Please draw a picture showing what lessons in your classroom are like during your favorite subject. Include your teacher and classmates in your drawing. Add 'bubbles' next to people in the drawing, where you can describe conversations in the classroom or the thoughts of individuals. Write 'ME' on the student who represents you in the drawing. Thank you, and I look forward to meeting you!" (Kuzle & Gracin, 2021). After administering the task, students were given 40 minutes to complete the drawing according to the instructions.

To analyze the data obtained from the students' drawings, the authors created a coding manual that provided descriptions of general categories from the CES questionnaire (Fraser & Fisher, 1983; Trickett & Moos, 1973). This manual was reviewed, expanded, and ultimately resulted in three categories: *Interpersonal relationships*, *Personal development*, and *Order*. In this study, the coding manual was adapted to ensure the dimensions were relevant to the research. In Kuzle and Gracin's (2021) study, perceptions of classroom climate were specifically related to mathematics lessons, where the use of specific tools and materials was relevant. In the current study, students were allowed to choose their preferred subject for the drawing. Consequently, the dimension "Materials and teaching tools" was removed from the *Personal development* category. Additionally, some sections of the coding manual that were specific to mathematics were adapted to offer greater generalizability, integrating other school subjects as well. Each category of the adapted coding manual is further divided into dimensions, subdimensions, and their own scales. The coding manual can be consulted in the next section in Table no. 2, where the results of the coding process can also be accessed. The drawings then served as a trigger for a semi-structured conversational interview, conducted by the author based on the principles of Kearney and Hyle (2004). During the interview, the 65 students who created the drawings described their work in response to questions related to them. Each interview lasted an average of five to seven minutes and was conducted individually, face to face. Students were asked to freely describe their drawing (e.g., "Describe your drawing to me"), but they were also posed specific questions based on their descriptions (e.g., "Does the teacher always stand in front of the board, or does she change her position during the lesson? And the students?", "Can you tell me what you were doing during this lesson?", etc.) (Kuzle & Gracin, 2021). The primary purpose of this conversational interview is to gain a better and more detailed understanding of what was intended to be represented as the classroom climate in the students' drawings.

3. Results

In Table no. 1, the means, standard deviations, minimum scores, and maximum scores for all dimensions of the questionnaire presented in this study are reported.

Table no. 1. *Descriptive statistics for the scores obtained by participants on the CCQ-P (N = 68)*

Variable	*M*	*SD*	*Min.*	*Max.*
Student Cohesiveness	4.25	0.73	1.60	5
Teacher Support	4.24	0.66	2.40	5
Equity	3.89	0.75	2	5
Responsibility for Learning	3.85	0.82	2	5
Clarity of Instructions	4.12	0.63	2.80	5
Involvement	3.40	0.76	1.60	4.80
Task Orientation	4.46	0.53	2.25	5
Personal Relevance	4.04	0.75	2	5
Collaboration	3.32	0.79	1.60	4.80

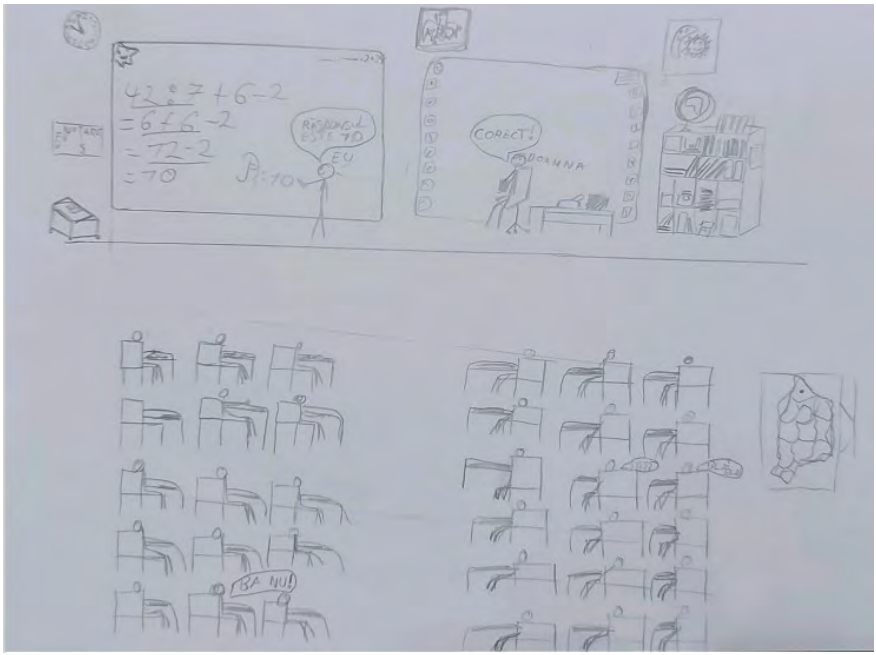
Note: N = number of participants; M = mean; SD = standard deviation; Min. = minimum score; Max. = maximum score.

The average scores for the dimensions of the questionnaire on students' perceptions of the classroom climate are generally high, resulting in an overall average score of 3.95. This indicates a positive classroom climate, which is also reflected in the students' drawings.

To identify students' perceptions of the classroom climate, a qualitative analysis of the drawings was conducted, complementing the results obtained from the CCQ-P questionnaire scores. Below is the descriptive data for the students' drawings.

Out of the 68 participants in this study, only 65 students followed the drawing instructions. Among these 65 drawings, 46 depicted the subject of Mathematics, 9 depicted the subject of Romanian language and literature, and the remaining drawings represented subjects such as Visual Arts and Practical Skills (3 drawings), English (3 drawings), Music (2 drawings), History (1 drawing) and Religion (1 drawing).

Figure no. 1 illustrates how the drawings were coded. The drawing was chosen due to the abundance, richness, and versatility of the data presented. The drawing was coded using the coding manual presented in the next section (Table no. 2) through a deductive approach. To describe the drawing, the following coding system was used from the table: D = category, letters A to C = dimensions, letters a to c = sub-dimensions, ordinal numbers (e.g., 1, 2, 3, etc.) = category number, position of each element in the sub-dimension scales, P = teacher, E = student. Numbers in parentheses represent the number of individuals depicted in that category. For example, the code D1.B.a2.E (22) represents the following: D1 (category Interpersonal relationships), B (dimension Verbal and non-verbal communication of the students), a2 (a = sub-dimension Position in the classroom, 2 = second element of the scale: At the table), E (22) = the number of 22 students sitting at the table.



The teacher is at the desk with a textbook in her hand. The drawing depicts 33 students sitting at their desks, observing the task. One student is at the board working on the task. The teacher gives a positive comment to the student at the board, saying "Correct!". Another student gives a negative comment to the student at the board, saying "No, it's not!". A

different student makes a negative comment, saying “BlaBla”.
The teacher remains at the desk, checking the correctness of the task being worked on at the board. The algebraic mathematical content and the lesson’s objective are clearly identified. A student maintains order in the classroom by saying “Shhhh”.
Coding of Category D1 Interpersonal Relationships: D1.A.a3.P: Verbal and nonverbal communication of the teacher; Position in the classroom; At the desk. D1.A.b6.P: Verbal and nonverbal communication of the teacher; Support by the teacher; Positive feedback. D1.B.a2.E(33): Verbal and nonverbal communication of the students; Position in the classroom; At the table. D1.B.a1.E(1): Verbal and nonverbal communication of the students; Position in the classroom; At the blackboard. D1.B.b9.E(33): Verbal and nonverbal communication of the students; Participation; Listening. D1.B.b8.E(1): Verbal and nonverbal communication of the students; Participation; Working on assignments on the blackboard. D1.B.b16.E(2): Verbal and nonverbal communication of the students; Participation; Negative expression. D1.B.b17.E(3): Verbal and nonverbal communication of the students; Participation; Made a comment unrelated to the lesson topic. D1.B.c19.E(30): Verbal and nonverbal communication of the students; Affiliation; No communication with other students. D1.B.c24.E(2): Verbal and nonverbal communication of the students; Affiliation; Negative comments towards other students. D1.C.a1: Organization; Working method; Teacher-centered instruction (frontal). D1.C.b6: Organization; Classroom seating arrangement; Traditional classroom arrangement.
Coding of Category D2 Personal Development: D2.A.a1: Goal orientation; Goal of the lesson. D2.A.a2: Goal orientation; The presence of the lesson content. D2.A.a4: Goal orientation; Students working on the assignment.
Coding of Category D3 Order: D3.A.a1: Keeping order; Student led.

Figure no. 1. *Drawing illustrating the subject of Mathematics*

In the following table, Table no. 2, we will present the coding manual including the percentage of each element from the coding manual that appears within the total of 65 drawings. These percentages were calculated at the end of the drawing coding phase and provide a statistical view of the frequency of certain elements in the drawings made by the students.

***Table no. 2**. Coding manual*

1. CATEGORY: INTERPERSONAL RELATIONSHIP		
DIMENSION	SUBDIMENSION	THE PERCENTAGE OCCURRENCE OF THE SCALE
Verbal and nonverbal communication of the teacher	Position in the classroom	In front of the blackboard (44.62%), Among students (6.15%), At the desk (38.46%), Somewhere in the classroom (10.77%)
	Support by the teacher	Assistance (14.00%), Positive feedback (8.00%), Negative feedback (2.00%), Questions related to the lesson taught (8.00%), Statements related to the lesson taught (11.00%), Observation (6.00%), Comments unrelated to the lesson taught (11.00%), Passive (42.00%)
Verbal and nonverbal communication of the students	Position in the classroom	At the blackboard (20.00%), At the table (87.69%), Next to the teacher (1.54%), In front of the blackboard (9.23%), Amongst other students (0.00%), Somewhere in the classroom (10.77%)
	Participation	Working on assignments at the table (63.08%), Working on assignments on the blackboard (24.62%), Listening (12.31%), Responding (12.31%), Questioning (6.15%), Asking for assistance (1.54%), Review (0.00%), Discussion (6.15%), Positive expression (9.23%), Negative expression (9.23%), Made a comment unrelated to the lesson topic (35.38%), Passive (20.00%)
	Affiliation	No communication with other students (98.85%), Student-student communication (12.31%), Student-student encouragement (1.54%), Student-student help request (4.62%), Student-student support (1.54%), Negative comments towards other students (3.08%)
Organization	Working method	Teacher-centered instruction (frontal) (95.38%), Individual work (1.54%), Group work (1.54%), Working with a partner (1.54%), Work/discussion while sitting in a (half-)circle (0.00%)
	Classroom seating arrangement	Traditional classroom arrangement (95.38%), U-shaped arrangement (0.00%), Mixed arrangement (3.08%), (Half-) circle arrangements (1.54%), Group tables (0.00%)
2. CATEGORY: PERSONAL GROWTH		
DIMENSION	THE PERCENTAGE OCCURRENCE OF THE SCALE	
Goal orientation	Goal of the lesson (4.62%), The presence of the lesson content (87.69%), The teacher identifies the lesson content (29.23%), Students working on the assignment (76.92%)	
3. CATEGORY: ORDER		
DIMENSION	THE PERCENTAGE OCCURRENCE OF THE SCALE	
Keeping order	Student led (12.31%), Teacher led (57.69%), Not present (30.00%)	

From the analysis of Table no. 2, we observe that in most of the drawings, the teacher is placed at the front of the class or at the teacher's desk. Correlating this with the methods of instruction, it is evident that teaching is teacher-centered, with the teacher delivering lessons from the front in nearly all drawings. Additionally, the teacher' preference for frontal teaching is associated with the traditional arrangement of the classroom. Regarding the support provided to students, teachers are passive in half of the drawings, while in the other drawings, they offer assistance and feedback to students or make various comments related or unrelated to the lesson topic

represented in the drawing. In most drawings, students are shown working individually at their desks, rarely interacting or asking questions, with lesson content present and order maintained primarily by the teacher.

A representative drawing from the study exemplifies a passive, front-positioned teacher instructing traditionally seated students who seldom engage in peer interaction, questioning, or discussion; while these characteristics predominate, some drawings display minor variations.

3.1. Interpretation of the CCQ-P results in relation to the Students' Drawings

The analysis of both research methods yielded quite varied results. While the questionnaire revealed students' perceptions in relation to nine dimensions of classroom climate, the drawings uncovered aspects that complemented the questionnaire, such as: the students' positions in the classroom, the teacher's position in the classroom, the arrangement of the classroom furniture, teaching methods of the teacher, various conversations taking place in the classroom, etc. Thus, the two methods complement each other, providing a comprehensive view of students' perceptions of their classroom climate.

In relation to the overall mean score obtained from CCQ-P, which is 3.95, indicating a positive classroom climate, we can understand a similar result from the students' drawings. Generally, the high scores obtained in the CCQ-P dimensions are also reflected in key elements of the students' drawings. However, there are some differences between the results obtained from the questionnaire and those from the drawings.

The first notable difference is regarding the dimension of collaboration, which is present in both CCQ-P and drawings. The average score for the collaboration dimension in the CCQ-P is 3.32, which contradicts what was observed in the students' drawings. In 98.85% of the drawings, students do not communicate with their peers, highlighting a lack of collaboration or teamwork. Alongside collaboration, student involvement registered an average of 3.40, while the drawings clearly show a lack of direct communication between students or poor communication between teacher and students.

Regarding the support provided to students by the teacher, the CCQ-P questionnaire dimension scored an average of 4.24. However, this seems to be only partially accurate based on the analysis of the drawings, as in 42% of the drawings the teacher was passive towards the students, offering assistance and feedback in 14% and 10% of the drawings, respectively.

Apart from these differences between the two applied methods, there are also striking similarities. In the dimension of task orientation from the questionnaire, the highest average score was obtained, namely 4.46. This is also evident in the students' drawings, as they are attentive and work on tasks either at their desks, in 63.08% of the drawings, or at the board, in 24.62% of cases. Thus, students demonstrate an understanding of the lesson's importance, even if it is not within their personal area of interest, and they are attentive during the lesson to grasp what is being presented.

4. Concluding discussion

The aim of this research was to analyze the differences between and complementarity of two research approaches to classroom climate – the CCQ-P and drawings combined with semi-structured interviews. The average scores of the questionnaire dimensions for students' perceptions of classroom climate are generally high, resulting in an overall mean score of 3.95, which indicates the presence of a positive classroom climate, a finding also reflected in the analysis of the drawings. The drawings revealed elements that complemented the questionnaire, providing a more detailed picture of daily classroom practices. Accordingly, we aim to present the results shared by both methodologies, as well as those that indicate differing perspectives on the same aspect, contextualized alongside findings in the specialized literature. To facilitate a clearer understanding of how the two methodologies intersect and support each other, we have organized the questionnaire dimensions in relation to themes identified in the drawings.

First, we aim to address the aspect of collaboration, which, despite receiving a relatively high score in the questionnaire, is not as prominently represented in the drawings. In research conducted by Ryan and Patrick (2001), the importance of social factors in relation to classroom climate was emphasized,

describing classrooms as "inherently social places" (p. 438). Their research showed that students tend to adopt effective learning models in a class where the emphasis is on collaboration, where their needs and ideas are supported, respected, and listened to by the teacher. Thus, we can conclude that collaboration encompasses both the support provided by the teacher to students and the relationships between students, as well as between teachers and students. This perspective allows us to understand the significance of collaboration, while also highlighting the differences observed between the two methods. It is highly relevant for teachers to have the competence to understand classroom climate from the perspective of their students. The drawings created by students offer a window into their perceptions of the classroom learning environment, making them valuable tools for educators.

Given that teachers are key factors in influencing students' learning outcomes (Hattie, 2013), their ability to interpret and adapt teaching methods based on these perceptions can lead to a more effective and student-centered learning environment. This aspect is not very evident in the drawings; in fact, the learning environment is mostly teacher-centered and teacher-led, with traditional methods and techniques predominating (in line with the findings of drawing-based research by Nedelcu, 2013 and Ulrich, 2008). In the drawings, which effectively complement the teacher support dimension from the questionnaire, it can be observed that the teacher rarely provides feedback and mainly focuses on explaining the lesson content. Educational methodology has recently undergone significant developments to meet the new requirements of the educational system. The goal is to transition from traditional teaching, focused on knowledge transmission, to a modern model that balances individual and collaborative work, combining personal learning with interactive learning (Iacob, 2016). However, following the analysis of the students' drawings, it is evident that there is a slow transition, with a continued preference for traditional teaching and very few elements related to a model that supports student-centered learning.

Regarding the positioning of students and the teacher in the classroom, we again observe a preference for traditional teaching methods and, often, a low level of collaboration between students. This arrangement also suggests that students perceive themselves as equals, as they are all treated the same and work on the same task in a whole group setting. This suggests that,

most of the time, students are primarily listening to what the teacher says. However, a study conducted by Trickett and Moos (1973) emphasized that teachers can also learn a great deal about their own teaching practices using classroom climate analysis tools by understanding how students perceive the classroom climate. This allows teachers to identify areas that need improvement and to initiate constructive dialogues with students. These dialogues not only improve the teaching process but also contribute to creating a more positive classroom climate that supports collaboration, mutual respect, and student motivation. By emphasizing the student's needs and interests, teachers can create a positive social climate in the classroom, integrating students' perspectives into the learning process (Ryan & Patrick, 2001). As students grow and their needs change, it is understood that learning environments should also be adjusted to support these developmental needs of the learners (Wang et al., 2017; Wang et al., 2014, as cited in Wang et al., 2020). Therefore, it can be inferred that if teachers focused more on understanding their students and addressing their needs, the classroom climate could be significantly enhanced.

This study highlights the value of integrating qualitative and quantitative methods to gain a fuller picture of classroom climate. While the CCQ-P shows generally positive trends, students' drawings reveal subtle, yet pervasive teacher-centered practices and limited peer interaction, providing insights otherwise overlooked. Theoretically, this dual approach deepens understanding of classroom dynamics, suggesting that teacher-centered methods may limit collaboration. Practically, students' drawings serve as diagnostic tools for teachers to adapt their strategies, fostering more collaborative, communicative, and inclusive environments that better reflect student perspectives.

A limitation of this study is the fact that students might not have responded honestly in the questionnaires or drawings. Despite efforts to minimize teacher presence during the tasks, social pressure may lead students to provide socially desirable responses rather than truthful ones, pointing to a limitation of this study. Another limitation of this study is the small sample size, consisting of 68 fourth-grade students from three classes in a single school. Future studies should involve a larger and more diverse sample to provide a more comprehensive analysis of students' perceptions of classroom climate. The

study, while insightful regarding classroom climate, has some design limitations. Potential sampling bias may restrict generalizability if the sample is not diverse. A cross-sectional design offers only a snapshot of interactions, lacking the depth of longitudinal analysis.

Furthermore, the emphasis on particular methodological approaches might overlook crucial contextual factors, such as cultural influences and socio-economic status, that significantly impact classroom dynamics. This limitation underscores the need for a more comprehensive exploration of these elements to fully understand the complexities of classroom interactions and enhance the study's relevance across diverse educational settings.

Addressing these limitations in future research is crucial for interpreting the study's results and for guiding subsequent investigations. By utilizing longitudinal designs with larger and more diverse samples, future studies could enhance the applicability of the findings across various educational settings and examine how students' perceptions of classroom climate evolve throughout their primary education. This approach would provide a more comprehensive understanding of the dynamics at play and improve the overall relevance of the research.

This study underscores the essential complementarity of quantitative and qualitative methods in examining students' perceptions of classroom climate. By integrating these diverse approaches, researchers and educators can attain a more accurate understanding of students' experiences, ultimately facilitating the promotion of a positive and inclusive atmosphere within the educational environment. Such a multifaceted perspective is crucial for fostering an enriching learning environment that supports the diverse needs of all students.

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