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MANAGEMENT OF CLASSROOM-BASED PHYSICAL EDUCATION LESSONS

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ABSTRACT. *Introduction:* In recent years, the management of physical education lessons has faced multiple challenges, particularly in situations where classes must be held indoors due to lack of facilities or unfavorable weather. The physical space of the classroom poses significant limitations, requiring teachers to adopt specific management strategies and instructional adaptations. *Objective:* The aim of this study is to analyze how physical education lessons are managed when conducted in the classroom setting. The research aimed to identify the instructional adaptations, spatial strategies and safety measures teachers employ when traditional sport facilities are unavailable, providing evidence-based insights for delivering safe and effective classroom-based physical education. *Materials and methods***:** Data was collected through an online questionnaire distributed via Google Forms. The sample consisted of 17 physical education teachers from the Șimleu Silvaniei area. The questionnaire included 19 items focused on the frequency of classroom-based lessons, instructional strategies, planning methods, digital resource usage, and perceived challenges. Responses were analyzed descriptively, using tables and graphs to support interpretation. *Results***:** The results indicate that most teachers frequently conduct physical education lessons in the classroom, especially at the primary level. Although only a small percentage have received formal training in this area, many express interest in professional development. The most commonly used methods include low-intensity exercises, movement adaptation, and digital tools. The main obstacle identified was the limited physical space available. *Conclusion***:** The findings highlight the need for targeted training and better resource allocation to support physical education in constrained indoor environments. Effective management of such lessons depends on the teacher's ability to adapt content, use technology, and maintain student engagement despite space and other limitations.

Keywords: Physical education; lesson management; teacher competence; school facilities; classroom-based.

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INTRODUCTION

In recent decades, Physical Education (PE) has become increasingly aligned with broader educational reforms aimed at improving curricular coherence, learning quality and scholars well-being. Within this framework, PE is defined as a structured, intentional process that contributes to physical development, motor competence, health promotion and the formation of personal and social skills (Hanțiu & Stănescu, 2010). As part of the national curriculum, PE is required to fulfil formative, health-oriented and behavioural objectives, ensuring active participation and the acquisition of fundamental motor abilities.

Modern educational perspectives emphasise that learning outcomes in PE depend not only on motor content but also on the school environment, organisational quality and teaching conditions (Guo et al., 2023; Zhang et al., 2022). Research shows that the physical and organisational context of schools including: space availability, equipment, time allocation and teacher support; significantly influences scholars' physical activity and engagement levels (Blaes et al., 2013; Delidou et al., 2015; Morton et al., 2016).

In the context of European schools, there is an increasing tendency to integrate physical activity into non-traditional spaces, particularly in institutions with limited infrastructure. International studies show that movement opportunities in adapted environments can still support motor development and contribute to meeting WHO standards for children's physical activity, provided that tasks are well adjusted to the environment (Kriemler et al., 2023; WHO, 2020).

Teacher competence plays a central role in PE lesson effectiveness. Contemporary studies highlight the importance of classroom management skills, task differentiation, communication, safety protocols and adaptive teaching strategies, particularly when instruction takes place outside specialised sports environments (Botgros & Franțuzan, 2010; Grube et al., 2018; Shandi, Bakhtiar, & Mahdi, 2025). Professional competence also includes the ability to monitor progress, design developmentally appropriate tasks and maintain a motivating learning atmosphere. In modern educational management, teachers are viewed as both instructional leaders and organisational managers. The ongoing digitalisation of education provides significant support for instructional activities in physical education. Digital tools and online platforms facilitate efficient lesson planning, enable high-quality technical demonstrations, offer visual and interactive materials that strengthen conceptual understanding and foster student motivation (Manole, 2023; Țurcanu & Jurat, 2024).

In a few Romanian schools the access to sports facilities is reduced, PE is often conducted in improvised indoor spaces such as classrooms, corridors or multipurpose halls. These conditions require teachers to reorganise content,

modify task complexity and apply strict safety measures (Ghidarcea, 2012). Classroom-based lessons reduce movement amplitude and teacher visibility, increasing the need for well-structured routines and spatial organisation practices (Fitzgerald & Deutsch, 2016). Research on motor learning in restricted spaces highlights the importance of micro-planning strategies, routine, and optimised teacher visibility (Hudson, 2022), which are essential for maintaining safety and lesson fluency. Furthermore, recent literature emphasises the significant role of educational technologies in providing visual support and enhancing student engagement when movement volume is inevitably reduced (Casey, Goodyear, & Armour, 2017).

Current research confirms that confined indoor environments limit movement amplitude and require teachers to select low-risk motor tasks that can be executed safely in reduced spaces (Hartikainen et al., 2023). Within these constraints, teachers can still implement applicative motor skills, simplified gymnastic elements or low-risk sport-specific tasks (such as controlled passing or dribbling) provided that space allows safe execution.

Theoretical or seminar-type lessons also represent a valuable alternative in such contexts, enabling pupils to develop cognitive competences through structured explanations, visual materials and guided discussion. Contemporary literature highlights the pedagogical value of this lesson format, emphasising its clarity, logical sequence and effectiveness in supporting conceptual understanding.

Safety remains a critical consideration when adapting PE lessons to classroom environments. Teachers may improvise with soft, lightweight or low-risk materials to minimise the likelihood of injury, while ensuring that tasks emphasise control rather than speed or force. Current evidence shows that systematic risk-management strategies and explicit safety rules significantly reduce injury risk in constrained PE settings (Fitzgerald & Deutsch, 2016).

The purpose of this study was to examine how physical education lessons can be effectively organised and managed in classroom settings with limited space. The research aimed to identify the instructional adaptations, spatial strategies and safety measures teachers employ when traditional sport facilities are unavailable, providing evidence-based insights for delivering safe and effective classroom-based physical education.

MATERIAL AND METHODS

In the study we used a descriptive, questionnaire-based design to investigate how physical education lessons are managed when they must be conducted in classroom settings. The approach combined quantitative items with open-ended

questions, allowing both numerical description and qualitative insight into teachers' strategies of adaptation, space management and safety.

The research involved 17 physical education teachers from the area of Șimleu Silvaniei (Sălaj County, Romania), distributed across eight pre-university institutions: "Silvania" Gymnasium School (3 respondents), "Horea" Gymnasium School (2), "Bathory Istvan" Gymnasium School (1), the Center for Inclusive Education (1), "Simion Bărnuțiu" National College (3), "Iuliu Maniu" Technical College (1), "Ioan Ossian" Technological High School (2) and Gymnasium School No. 1 Pusta (4). These teachers formed a relatively homogeneous professional group, all specialised in physical education, and included teachers who had situations in which they were required to conduct physical education lessons in the classroom, due to the absence, distance or limited availability of outdoor/indoor specialised sports facilities.

Data were collected using a 19-item questionnaire designed specifically for this study, adapted from the PESSEI (Physical Education and School Sport Environment Inventory) instrument, which evaluates the physical, material and organisational conditions relevant to school-based physical education, validated by Fairclough, Hilland, Vinson, & Stratton in 2012. The items were constructed based on the research objectives and relevant literature on educational management and physical education methodology. The questionnaire underwent a minimal content-validation process through consultation with two experts in physical education methodology to ensure that the items were relevant to the study's objectives. This procedure aligns with methodological recommendations for adapting research instruments to specific contexts (Boateng et al., 2018).

The questionnaire included: introductory items describing the respondent's profile (qualification, teaching level, schools, etc.); questions on lesson organisation and management in the classroom (methods used, content selection, spatial organisation, use of digital resources); items on perceived challenges and solutions, including safety measures and improvisation of materials; open-ended questions that allowed teachers to describe concrete practices, difficulties and examples of good management. The questionnaire was administered primarily via Google Forms, a free online platform accessible to all participants with a Google account, and was also available in printed form where needed. Approved informed consent was obtained from all subjects prior to participation, and all respondents participated voluntarily after being informed about the study objectives, procedures, and the confidential handling of their data.

Quantitative data were analysed in Microsoft Excel using frequencies and percentages. Open-ended responses were examined through thematic analysis to identify recurring themes (e.g., content selection, organisation, challenges,

improvisation, and safety/hygiene measures). Together, these analyses described how teachers manage classroom-based physical education under spatial and organisational constraints.

RESULTS

The results are presented according to the sequence of questionnaire items, combining descriptive statistics with graphical representations to illustrate response distributions. The following subsections summarise the main findings regarding teachers' managing skills in teaching context, frequency of classroom-based instruction, preparation practices, instructional methods, curricular content and use of digital resources. The distribution of responses indicates that most teachers are required to conduct physical education lessons in the classroom with varying frequency. A total of six respondents (35.3%) reported that this occurs rarely, while four teachers (23.5%) indicated that they teach in the classroom often. Three respondents (17.6%) stated that this happens sometimes, whereas two teachers (11.8%) reported conducting such lessons very often. Only one teacher (5.9%) selected never, and another one (5.9%) stated very rarely (Figure 1).

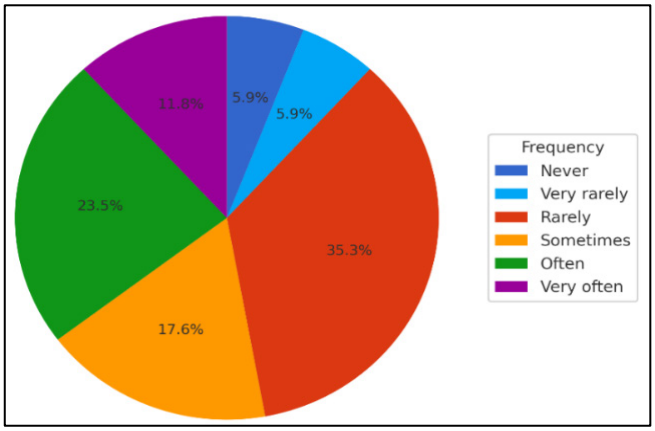

Fig. 1. Frequency of conducting PE lessons in the classroom

According to Table 1, only one teacher (5.9%) had attended training on conducting PE lessons in the classroom. Most respondents had not participated in such programmes, with six teachers (35.3%) selecting "No." Notably, nearly half of the participants (47.1%) expressed interest in attending such training, while two teachers (11.8%) did not consider it necessary.

Table 1. Participation in training sessions for conducting PE lessons in the classroom

Response option	Number of respondents	Percentage (%)
Yes	1	5.9%
No	6	35.3%
I would like to	8	47.1%
I do not consider it necessary	2	11.8%

According to Table 2, the most frequently reported preparation methods were adapting exercises (10 mentions) and reorganising classroom furniture (9 mentions). Fewer teachers indicated planning specifically for limited space (4 mentions), using available or improvised materials (3 mentions), or conducting theoretical activities (1 mention). Two respondents stated that they do not conduct PE lessons in the classroom. Regarding the class levels in which teachers conduct PE lessons in the classroom, most respondents reported working with primary classes (52.9%). Fewer teachers indicated teaching at the lower-secondary level (17.6%) or upper-secondary level (17.6%), while two respondents (11.8%) stated that they do not conduct classroom-based PE lessons.

Table 2. Preparation methods used by teachers for conducting PE lessons in the classroom

Preparation method	Number of mentions	Examples provided by respondents
Adapting exercises	10	*"I use exercises adapted to the space", "Static exercises"*
Moving/reorganising the furniture	9	*"I move the desks", "I ensure free space for activities", "Reorganising the furniture"*
Planning for limited space	4	*"I plan the lesson for reduced space", "Specific preparation"*
Using existing/improvised materials	3	*"I use what I have in the classroom", "Improvised materials"*
Theoretical activities	1	*"We discuss rules, competitions, projects"*
Does not conduct the lesson in the classroom	2	*"I do not teach in the classroom"*

The largest proportion of teachers (40%) reported that they need approximately 5 minutes to prepare the classroom space before a physical education lesson. Smaller groups indicated 1–2 minutes or 3–4 minutes (20% each), while 13.3% reported no preparation time at all. Only 6.7% stated that

preparation requires 10 minutes (Figure 2). These findings indicate that most teachers perform quick spatial adjustments, with an estimated average preparation time of 4.1 minutes.

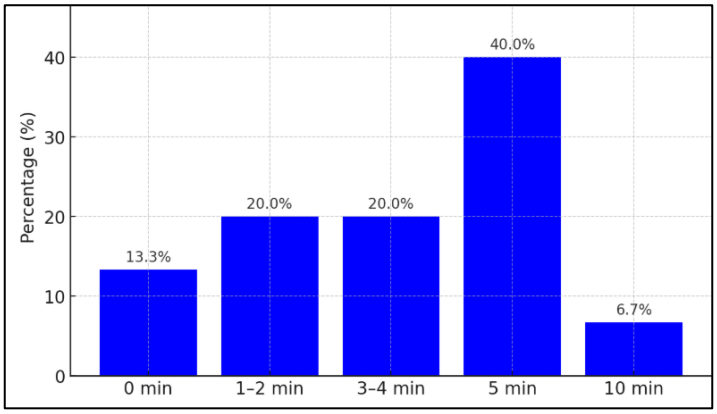

Fig. 2. Time allocated to organize the classroom to ensure space

The most frequently used strategy for adapting PE lessons to the classroom were low-intensity exercises (12 mentions, 70.6%), followed by alternative materials (10 mentions, 58.8%) and digital resources (8 mentions, 47.1%). Additional examples reported in the "Other" category included the use of video materials on game theory, rules, player positions, and the incorporation of activities such as learning chess (Figure 3).

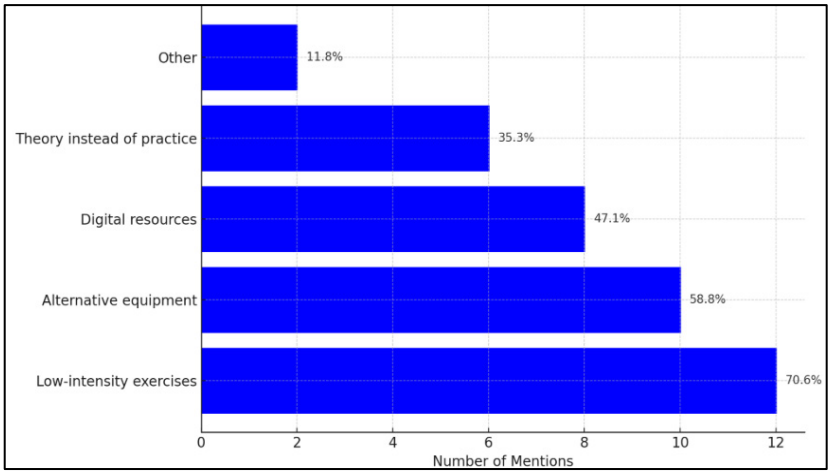

Fig. 3. Strategies used for adapting PE lessons

Distribution of curricular content most frequently used by teachers. The most prominent category is agility (coordination skills), selected by 14 teachers (82.4%). Strength and reaction speed follow with 10 mentions each (58.8%), reflecting an emphasis on low-space, individually executable motor skills. More spatially demanding components such as acrobatic gymnastic (35.3%) and aerobic gymnastic (23.5%) appear less frequently. The "Other" category (23.5%) includes dance, dexterity exercises, table tennis elements, dumbbell strength drills, and chess (Figure 4).

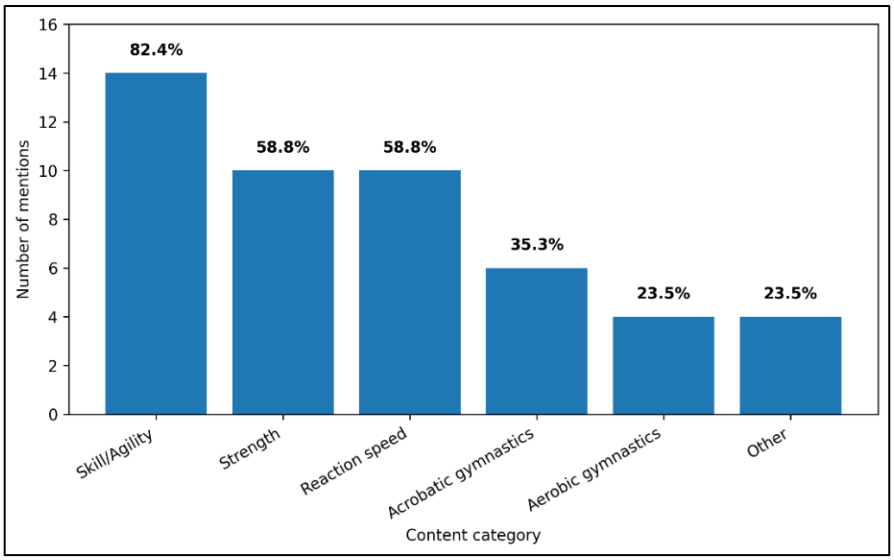

Fig. 4. Curricular content used in classroom-based PE lessons

Demonstrative videos (28.1%) and projectors (25.0%) emerged as the most commonly used digital resources in physical education lessons, indicating a preference for visual and easily accessible instructional tools. In contrast, smart boards were reported as the least frequently used resource (6.3%), suggesting limited availability or reduced applicability (Figure 5).

The most frequently applied hygiene measure is ventilation/aeration, reported by 52.9% of teachers (n=9). Respecting personal hygiene norms and having no specific hygiene measures appear equally common (35.3%, n=6 each). Fewer teachers reported equipment disinfection (17.6%, n=3), while only 5.9% (n=1) mentioned ensuring physical distancing or requiring handwashing at the end of the lesson (Figure 6).

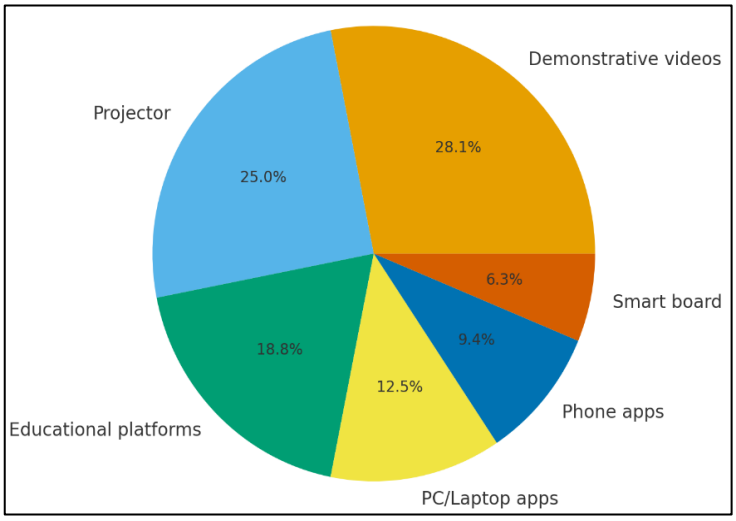

Fig. 5. Digital resources used in PE lessons

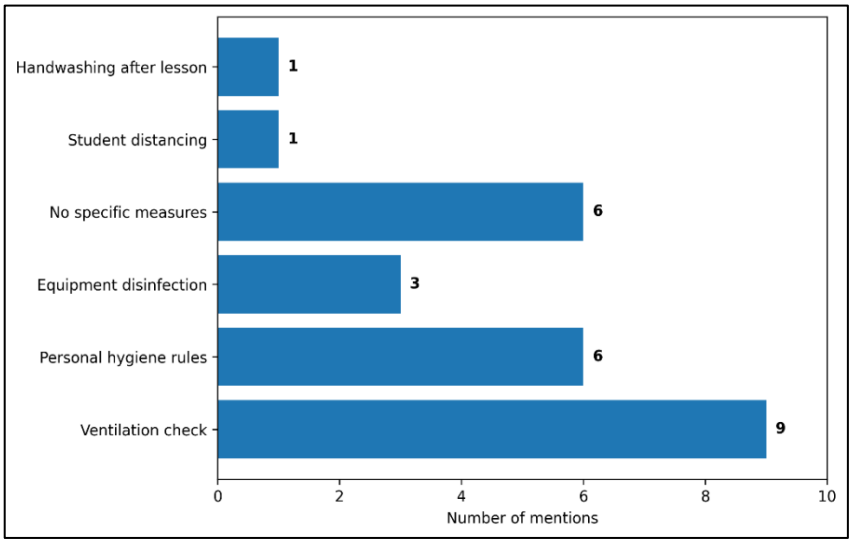

Fig. 6. Hygiene measures used in classroom-based PE lessons

The main obstacles identified by teachers when conducting physical education lessons in the classroom was space constraints, mentioned by 64.7% of respondents (n = 11). This is followed by the high number of students in the classroom (47.1%, n = 8) and the lack of equipment or materials (41.2%, n = 7).

A smaller proportion (23.5%, n = 4) reported other obstacles, such as limited furniture mobility, insufficient movement space, excessive noise, and a lack of material variety (Figure 7).

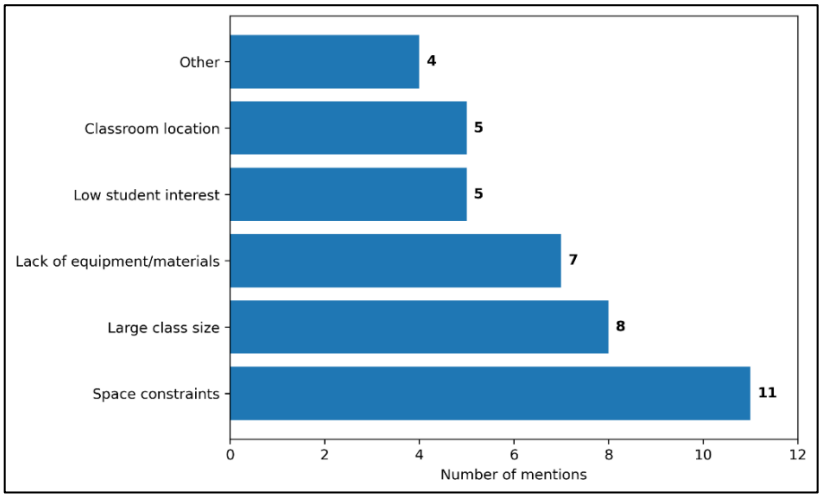

Fig. 7. Main obstacles identified in PE lessons conducted in classroom

DISCUSSIONS

The present study examined how teachers manage physical education lessons when they must be conducted in the classroom rather than in specialised sports facilities. This context introduces substantial pedagogical and organisational constraints, requiring teachers to make rapid decisions regarding safety, content selection, class management, and technological integration.

The findings reveal a highly adaptive teaching environment shaped by structural limitations, teacher competencies, and contextual demands.

A first notable result concerns the frequency and level at which classroom-based PE is practiced. More than half of the participating teachers (52.9%) reported delivering such lessons in primary school classes. This is consistent with broader evidence suggesting that environmental and infrastructural conditions strongly influence opportunities for physical activity and shape teaching patterns (Morton et al., 2016).

Younger pupils are more often assigned to indoor spaces due to weather, safety, scheduling, and facility constraints. Indoor lessons are common, professional preparation for teaching PE in limited classroom spaces is scarce. Findings from

Table 1 reveal that only one of the teachers involved in this study had received specialised training in this area, despite the fact that nearly half expressed interest in such professional development. This gap can be also found in previous studies emphasising the critical role of teacher competence in delivering high-quality PE instruction (Botgros & Franţuzan, 2010; Shandi et al., 2025). The absence of systematic training contributes to variability in the quality and safety of classroom-based lessons, as teachers rely predominantly on personal experience and improvisation.

Teachers' approach to organisation and space management further reflects these challenges. The chart regarding classroom preparation time (Fig. 2) indicates a mean of approximately 4.1 minutes needed to arrange a functional learning space. Most teachers required between three and five minutes to reorganise furniture, establish movement zones, or prepare materials. This fast turnaround underscores the need for efficient planning and aligns with Ghidarcea's (2012) findings that effective PE management in schools relies on the teacher's ability to optimise space and maintain clear organisational routines. The teaching strategies chosen by the respondents demonstrate a strong emphasis on control and safety (Fig. 3). These choices reflect established principles of classroom management, particularly when visibility is restricted and movement must be carefully monitored (Charette, 2018).

In terms of curricular content, teachers favoured activities that could be safely executed in limited space. The chart on content usage (Fig. 4) shows that coordination (82.4%), strength exercises (58.8%), and reaction speed tasks (58.8%) were the most frequently implemented. These motor skills require minimal displacement and allow for precise, controlled execution. Spatially demanding components, such as acrobatic and aerobic gymnastics, were used less often, reflecting the challenges of performing them safely in crowded classrooms. The prioritisation of low-intensity, skill-based activities mirrors patterns identified in previous research on physical activity in constrained environments (Blaes et al., 2013). A significant facilitator in this context is the use of digital tools, which play a major role in enhancing instruction when physical movement is restricted.

According to the digital-resources chart (Fig. 5), teachers most frequently employed demonstrative videos (64.3%), projectors (57.1%), and educational platforms (42.9%). These technologies support the visual demonstration of motor tasks, facilitate theoretical instruction, and help sustain student engagement. This aligns with contemporary research on blended learning in PE, which highlights the pedagogical value of digital integration (Manole, 2023; Ţurcanu & Jurat, 2024). Furthermore, studies indicate that teacher support and clear instructional modelling (often enhanced through digital means) positively influence student engagement (Zhang et al., 2022; Guo et al., 2023).

However, despite the potential of digital resources, there are noteworthy inconsistencies in hygiene and safety measures. As shown in the hygiene chart (Fig. 6), the most common practices were ventilation checks (52.9%) and personal hygiene reminders (35.3%). Yet, more than one-third of the teachers (35.3%) reported not applying any specific hygiene measures during classroom-based lessons. Given the established importance of safety guidelines in PE settings, particularly indoors (Fitzgerald & Deutsch, 2016), this finding points to gaps in institutional support and the absence of standardised protocols for such learning environments.

Finally, the study identifies the structural challenges that most hinder effective classroom-based PE. The obstacle chart (Fig. 7), reflect systemic issues that limit the ability of teachers to deliver high-quality PE beyond the gymnasium. They also resonate with prior research demonstrating that limited facilities, inadequate equipment, and constraining spatial environments reduce student engagement and restrict the range of possible learning activities (Delidou et al., 2015; Morton et al., 2016). Teachers' qualitative comments reinforce these findings, noting challenges such as fixed classroom furniture, insufficient space for movement, excessive noise, and limited material variety.

Taken together, these results depict a PE instructional environment that relies heavily on teacher creativity, adaptability, and personal initiative. While teachers demonstrate resilience and resourcefulness, the broader structural and institutional conditions do not sufficiently support the delivery of safe, equitable and pedagogically coherent classroom-based PE.

CONCLUSIONS

This study showed that teaching physical education in the classroom has become a frequent necessity in many schools, especially at the primary level. Physical education teachers manage these lessons by adapting exercises and content, reorganising space, and integrating digital resources. However, the limited availability of formal training and the inconsistent application of hygiene and safety measures reveal a gap between curricular expectations and actual conditions. Persistent constraints, especially restricted space, large class sizes, and inadequate equipment indicate the need for clearer institutional guidance, targeted professional development, and improved infrastructural support to ensure safe and effective delivery.

AUTHORS CONTRIBUTION

Maria-Lorena Mogoş contributed to the conceptualization and design of the study, data collection, and initial drafting of the manuscript. Velu-Sebastian Bartha contributed to the methodological design, data analysis, interpretation of results. Remus Văidăhăzan contributed to the conceptualization and design of the study, the critical review of the methodology and discussion sections and provided scientific supervision and also manuscript revision. Ramona Ancuţa Nuţ contributed to data interpretation, scientific supervision and manuscript editing. All authors have read and agreed to the published version of the manuscript

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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REFERENCES

Blaes, A., Ridgers, N. D., Aucouturier, J., Van Praagh, E., Berthoin, S., & Baquet, G. (2013). Effect of a playground marking intervention on school recess physical activity in French children. *Preventive Medicine, 57*(5), 580–584 https://doi.org/10.1016/j.ypmed.2013.07.021

Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health, 6*, 149. https://doi.org/10.3389/fpubh.2018.00149

Botgros, I., & Franţuzan, L. (2010). Competenţa profesională a cadrului didactic – condiţie decisivă în implementarea curriculumului şcolar. *Univers Pedagogic, 4*, 38–43

Casey, A., Goodyear, V.A., & Armour, K.M. (2017). Rethinking therelationship between pedagogy, technology and learning in health and physical education. *Sport, Education and Society, 22*(2) 288–304. https://doi.org/10.1080/13573322.2016.1226792

Charette, P. (2018). Mastering the dynamics of PE classroom management: A comprehensive guide. *Cap'n Pete's Power PE*, https://www.capnpetespowerpe.com/single-post/mastering-the-dynamics-of-pe-classroom-management-a-comprehensive-guide

Delidou, E., Matsouka, O., & Nikolaidis, C. (2015). Influence of school playground size and equipment on the physical activity of students during recess. *European Physical Education Review, 21*(3), 1-10, DOI: 10.1177/1356336X15598790

Fairclough, S. J., Hilland, T. A., Vinson, D., & Stratton, G. (2012). The Physical Education and School Sport Environment Inventory (PESSEI): Preliminary validation and reliability. *Environment and Behavior, 44*(1), 50–67. https://doi.org/10.1177/0013916510388495

Fitzgerald, A., & Deutsch, J. (2016). Limiting the risk of injury through safety guidelines in a physical education setting. *Journal of Human Sciences, 13*(2), DOI: 10.14687/jhs.v13i2.3783

Ghidarcea, A. (2012). The management of physical education lessons in secondary schools. *Procedia - Social and Behavioral Sciences*, 46. https://doi.org/10.1016/j.sbspro.2012.06.134

Guo, Q., Samsudin, S., Yang, X., Gao, J., Ramlan, M. A., Abdullah, B., & Farizan, N. H. (2023). Relationship between perceived teacher support and student engagement in physical education: A systematic review. *Sustainability, 15*(7), 6039. https://doi.org/10.3390/su15076039

Hanţiu, I., & Stănescu, M. (2010). Particularities of school physical education in Romania. *Palestrica Mileniului III, 11*(2), 258–261.

Hartikainen, J., Haapala, E. A., Poikkeus, A.-M., Rautio, T., Sääkslahti, A., Tammelin, T. H., & Finni, T. (2023). Classroom-based physical activity and students' movement: The role of teachers' instructions. *Learning Environments Research, 26*, 799–819. https://doi.org/10.1007/s10984-022-09411-3

Hudson, J. (2022). Teacher visibility and spatial organisation in adapted physical education environments. *Physical Education and Sport Pedagogy, 27*(6), 675–690. https://doi.org/10.1080/17408989.2021.1956633

Kriemler, S., Meyer, U., Martin, E., van Sluijs, E. M. F., Andersen, L. B., & Martin, B. W. (2023). Effectiveness of school-based interventions addressing physical activity and fitness in children: A systematic review and meta-analysis. *Sports Medicine, 53*(1), 45–67. https://doi.org/10.1007/s40279-022-01755-2

Manole, I.-C. (2023). *Blended learning: Adoptarea tehnologiilor digitale în sala de clasă*. Universitatea Transilvania din Braşov.

Morton, K. L., Atkin, A. J., Corder, K., Suhrcke, M., & Van Sluijs, E. M. F. (2016). The school environment and adolescent physical activity and sedentary behaviour: A mixed-studies systematic review. *Obesity Reviews, 17*(2), 142–158. https://doi.org/10.1111/obr.12352

Shandi, F., Bakhtiar, M., & Mahdi, N. (2025). Supervision of physical education teacher competence: A contextual approach based on the CIPP model. *International Journal of Instruction, 18*(1), 123–140. https://digitum.um.es/bitstreams/5668fc1f-f333-4728-a2ab-cb66306a9378

Ţurcanu, A.-P., & Jurat, V. (2024). *Optimizarea procesului instructiv-educativ în lecţiile de educaţie fizică şi sport prin utilizarea eficientă a tehnologiilor informaţionale, sub perspectiva principiilor acmeologice. Formarea continuă a specialistului de cultură fizică în conceptul acmeologic modern*, Ediţia a 3-a, 149–154, USEFS.

World Health Organization. (2020). WHO guidelines on physical activity and sedentary behaviour. World Health Organization. https://www.who.int/publications/i/item/9789240015128

Zhang, B. G., Chen, A., & Gu, X. (2022). Perceived teacher support and student engagement in physical education: A self-determination theory perspective. *Journal of Sports Sciences, 40*(10), 1205–1213. https://doi.org/10.1080/02640414.2021.2025382